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•

THE BOOK OF THE HOME

A Comprehensive Guide on all
matters pertaining to the Household

NEW EDITION

Prepared under the Editorship of
MRS. C. E. HUMPHRY

("Madge" of Truth)

With Contributions by
Many Specialists

VOLUME VI



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CONTENTS.

VOLUME VI.

CHOICE OF A CAREER.

Page

OCCUPATIONS FOR MEN. Accountants—Actors—Actuaries—Agriculture, &c.—Farmers—Horticulturists—Gardeners—Land Agents—Bailiffs—Land Surveyors and Valuers—Auctioneers and Appraisers—Teachers of Agriculture—Brewers—Millers—Analysts—Architects—Army—Army Doctors—Army Veterinary Surgeons—Army Chaplains—Indian Army Officers—Non-commissioned Officers—Army Schoolmasters—Police Appointments—Royal Irish Constabulary—Indian Police Force—Artists—Sculptors—Designers—Engraving, Etching, and Lithography—Photography—Wood-carving—Miscellaneous Artistic Occupations—Auctioneers—Builders—Civil Service (Home)—Civil Service (Indian, Colonial, &c.)—Clerks and Commercial Employés—Commercial Travellers—Engineers—Lawyers, &c.—Marines (Royal)—Medical Profession—Dentists—Chemists—Dispensers—Male Nurses—Veterinary Surgeons—Mercantile Marine—Musicians—Navy—Clerks in the Navy—Naval Instructors—Navy Chaplains—Royal Indian Marine—Seamen in the Navy—Religious Employment—Sanitary Inspectors—Secretaries—Singers—Surveyors—Teachers (in England and Wales)—Teachers (in Scotland)—Teachers (in Ireland)—Traders—Writers—Journalists—Authors—Translators—Librarians, &c. - -	1
OCCUPATIONS FOR WOMEN. Accountants—Artists and Art Teachers—Book-keepers—Children's Nurses—Clerkships—Civil Service Clerkships, &c.—Dispensing—Handicrafts—Inspectorships—Journalism—Librarians—Matrons in Institutions—Matrons in Schools—Medicine—Music—Needlework—Nursing the Sick—Photography—Physical Training—Plan-Tracing—Teaching—Type-writing - - - - -	27

HEALTH.

INTRODUCTORY. Necessity of Regular Exercise—Sleep—Prevention of Disease—The Advantage of Occupation—The Advantage of a Hobby - - -	40
SANITARY PRECAUTIONS. Infection—Disinfectants—The Flushing of Drains—Dust-bins—Care of Sinks—Ventilation - - - - -	43
PROPER FOOD. Purposes of Food - - - - -	45
PROPER CLOTHING - - - - -	48

SICKNESS.

Page

FAMILY MEDICINE CHEST. Cautions against Accidental Poisoning—Contents of Chest—Surgical Appliances - - - - -	50
PRECAUTIONS IN CASES OF INFECTIOUS DISEASE. Sick-room—Precautions for Household—Disinfection of Sick-room—Disinfection of Clothing—Fever Hospitals - - - - -	52
MANAGEMENT OF SICK-ROOM. Choice of a Doctor—Duties to the Doctor—Fees—Sick-clubs—Consultations—Preparation of Room—Washing the Patient—Changing Sheets—Prevention of Bed-sores—Conduct in the Sick-room—Temperature and How to Take It—Temperature Charts and How to Mark Them—Baths—The Wet Pack—Poultices—Linseed-meal Poultice—Linseed-meal and Mustard Poultice—Porridge or Oatmeal Poultice—Bread Poultice—Starch Poultice—Fomentations—Turpentine Stupes—The Nurse -	53
REMEDIES FOR SIMPLE AILMENTS. Patent Medicines—Massage—Acne (Blackheads)—Anæmia—Black Eye—Blackheads—Bloodlessness—Boils—Bronchitis—Bunions—Catarrh—Chapped Hands—Chilblains—Cold in the Head—Colic—Constipation—Consumption—Corns—Cramp—Croup—Deafness—Diarrhœa—Diphtheria—Dyspepsia—Earache—Feet, Bad-smelling—Fevers—Flat-foot—Flatulence—Giddiness—Gumboil—Hay Fever—Headache—Heart-burn—Hiccough—Hoarseness—Housemaid's Knee—Hysterics—Influenza—Insomnia—Lumbago—Mumps—Neuralgia—Night Sweats—Piles—Pleurisy—Pneumonia—Quinsy—Rheumatism—Rickets—Ringworm—Sciatica—Sleeplessness—Sore-throat—Stye—Tic-Douloureux—Toe-nail, Ingrown—Toe, Twisted—Tongue-tie—Tonsillitis—Toothache—Varicose Veins—Warts—Whitlow—Whooping-cough—Worms - - - - -	61
POISONS. Irritant or Corrosive Poisons: Symptoms and Treatment—General Poisons—General Treatment for Poisoning—Special Treatment—Alcohol—Opium—Belladonna—Prussic Acid—Strychnine—Croton Oil - - - - -	74
FIRST AID. Anatomical Relations—Physiological Functions—The Arrest of Bleeding—Bleeding from the Nose—Ruptured Varicose Veins—Wounds of Lips—Simple Cut—Fractures—Jaw, Fractured Lower—Collar-bone, Fractured—Shoulder-joint, Fractures round the—Elbow-joint, Fractures near the—Humerus, Fractured—Forearm, Fractured—Ribs, Fractured—Spine, Fractured—Thigh, Fractured—Knee-cap, Fractured—Leg, Fractured—Ankle, Fractured—Dislocation - - - - -	78
FITS. Fainting—Hysteria—Apoplexy—Epilepsy - - - - -	84
SUSPENDED ANIMATION. Drowning: Artificial Respiration—Suffocation by Poisonous Gases or by Hanging—Electrical Accidents—Frost-bite—Shock or Collapse—Concussion—Convulsions - - - - -	86
THE REMOVAL OF FOREIGN BODIES. Foreign Bodies in the Ear—Foreign Bodies in Food-passage—Foreign Bodies in Throat—Foreign Bodies in the Nose—Foreign Bodies in Eye—Lime in the Eye - - - - -	88
BANDAGES. Triangular Bandage—The Sling—Head Bandage—Bandage for Chest or Back—Shoulder Bandage—Elbow Bandage—Hand Bandage—Bandages for Buttocks—Knee Bandage—Foot Bandage—Roller Bandage - - -	89
MISCELLANEOUS INJURIES. Bruises—Burns—Scalds of Throat—Sprains—Insect Bites—Bites of Dogs—Sunstroke—Wounds—The Removal of the Injured - - - - -	93
DEATH. Notice to Registrar—Inquest—Funeral - - - - -	95

INVALID COOKERY.

	Page
General Remarks—Convalescence—Dishes and Drinks, To Keep Cool—Ice, To Keep—Meat, Washing of—Reheating of Food—Seasonings—Sweetening Agents—Beef, Raw, Balls—Beef-Tea, Hints on—Bread, Remarks on—Bread, Unfermented—Celery—Cereal Puddings, with Eggs—Chicken Dishes—Eggs—Fish—Game Creams—Jellies—Kedgerie—Pigeon, Steamed—Rusks—Rusk Pudding—Rice Pudding—Sweet-breads—Tapioca Pudding, with Eggs—Toast—Vermicelli Pudding, quickly made - - - - -	97
BEVERAGES. Apple-water—Barley-water—Bran Tea—Brandy Custard—Egg Wine—Lemonade—Milk—Toast-water - - - - -	109

HOME GYMNASTICS.

EXERCISES WITHOUT APPARATUS - - - - -	112
EXERCISES WITH THE EXPANDER - - - - -	129
EXERCISES WITH DUMB-BELLS - - - - -	133
INDIAN CLUB EXERCISES - - - - -	137
WAND EXERCISES - - - - -	142

MUSIC.

INTRODUCTION - - - - -	146
SINGING - - - - -	146
THE PIANOFORTE. Choice of a Pianoforte—Fashion and Pianofortes—Various Kinds of Pianofortes—Second-hand Pianofortes—Management of Pianofortes—Practising—Exercises for Beginners—Studies—More Advanced Studies—Reading Music—Loud and Soft Pedals—Dance Music—The Metronome—Classical and Romantic Music—How to Make Small Repairs in a Piano -	147
THE VIOLIN - - - - -	152
THE VIOLA - - - - -	153
THE VIOLONCELLO - - - - -	153
THE HARP - - - - -	154
THE GUITAR - - - - -	154
THE MANDOLINE - - - - -	155
THE HARMONIUM - - - - -	155
AMERICAN ORGAN - - - - -	156
THE FLUTE - - - - -	156
OBOE, CLARINET, AND BASSOON - - - - -	156
BRASS INSTRUMENTS - - - - -	156
THE BANJO - - - - -	157

	Page
THE ZITHER - - - - -	157
CONCERTED MUSIC - - - - -	157
MECHANICAL APPLIANCES - - - - -	158

BALL-ROOM DANCING.

INTRODUCTION. How to Learn—The Five Positions - - -	162
THE WALTZ. Reverse Turn, or Waltzing to the Left—Waltzing Straight Ahead without Turning—Waltzing Straight Backwards without Turning—Turning to the Left while Travelling to the Right—Changing from Right to Left Turn—Spring or Elasticity of Movement—Heavy Partners—Tempo - - -	165
THE TWO-STEP - - - - -	170
THE BOSTON - - - - -	170
THE POLKA - - - - -	170
SQUARE DANCES. The Quadrille—The Lancers—The Caledonians—The Quadrille Croisé - - - - -	171
THE COTILLION - - - - -	173
GOOD VERSUS BAD DANCE MUSIC - - - - -	173
ANTICS OF THE BALL-ROOM - - - - -	173

RECREATIONS.

INDOOR GAMES.

GAMES REQUIRING MOVEMENT. Badminton—Bagatelle—Billiards—Parlour Quoits—Ping-Pong—Skittles - - - - -	175
GAMES OF SKILL. Backgammon—Chess—Dominoes—Draughts—Draught-board Games—Halma—Reversi—Solitaire - - - - -	186
CARD GAMES. All Fours—Béziqne—Bridge—Cassino—Catch-the-Ten—Cribbage—Écarté—Euchre—Loo—Napoleon or Nap—Piquet—Poker—Pope Joan—Solo Whist—Vingt-et-un—Whist - - - - -	192

OUTDOOR GAMES AND SPORTS.

Archery—Athletics—Bandy—Baseball—Bowls—Boxing—Cricket—Croquet—Curling—Fencing—Fishing—Fives—Football—Golf—Hockey—Lacrosse—Lawn Tennis—Quoits—Rackets—Ring-Goal—Rounders—Rowing—Shinty—Skating—Ski—Swimming—Tennis—Tobogganing—Wrestling - - - - -	207
---	-----

HOLIDAYS.

INTRODUCTION - - - - -	225
COUNTRY AND SEASIDE HOLIDAYS. Lodgings—Boarding-houses—Furnished Houses—Sea Bathing—Trunks—Packing—Where to Go - - - - -	225

	Page
HOLIDAY TOURS. General—British and Irish Tours—Foreign Tours—Sea Voyages and Cruises	231
WALKING TOURS	235
CYCLE TOURING	236
CARAVANNING	240
CAMPING. Walking—Cycling—General	241
MOUNTAINEERING	243

CHRISTMAS AND OTHER FESTIVALS.

Christmas—Christmas Decorations—Christmas Festivities—Christmas Fare—New Year—Shrove Tuesday—Good Friday—Easter—Hallowe'en	249
--	-----

THE COMING OUT OF A DAUGHTER.

Conversation—A Graceful Carriage—Dress—Her First Ball—Her Ball Dress—Chaperons—At the Ball—Coming-of-Age Ceremonies	257
PRESENTATION AT COURT. Court Dress—Going to Court—In the Ball Room	260

A WEDDING.

I. IN ENGLAND. Marriage before the Registrar—Marriage by Banns—Marriage by License—Marriage by Special License—Mixed Marriages—Marriage with a Foreigner	263
II. IN SCOTLAND. Regular Marriage—Registration of Regular Marriage—Irregular Marriages—Registration of Irregular Marriage	265
PREPARATIONS FOR A WEDDING. Preliminary Arrangements—Wedding Invitations—Bridesmaids and Pages—The Bride's Dress—Preparation in the House	266
PRESENTS. The Donors—Display of the Presents—Presents from the Bridegroom	268
THE CEREMONY. Accommodation of Guests—Floral Decorations—The Celebration—Signing the Register—Departure from the Church—Fees—The Trouseau—Wedding Reception—Departure of the Bride and Bridegroom—Wedding-cake and Cards—Wedding Notices	269

INDEX	275
--------------	-----

LIST OF PLATES.

VOLUME VI.

	Page
BILLIARD ROOM (by Messrs. Burroughes and Watts) (<i>Coloured</i>)	<i>Frontispiece</i>
THE ARRANGEMENT OF THE SICK-BED - - - -	54
CHANGING THE UNDER-SHEET IN THE CASE OF A HELP- LESS PATIENT - - - - -	56
COMMON POISONOUS PLANTS (<i>Coloured</i>) - - - -	76
ARTIFICIAL RESPIRATION: Sylvester's Method - - - -	86
ARTIFICIAL RESPIRATION: Howard's Method - - - -	88
ARTIFICIAL RESPIRATION: Schäfer's Method - - - -	90
MUSICAL INSTRUMENTS (<i>Coloured</i>) - - - - -	146
MECHANISM OF THE PIANOLA - - - - -	160
PORTABLE TENTS - - - - -	242
DRAWING-ROOM WITH CHRISTMAS DECORATIONS (<i>Coloured</i>) -	250
SUGGESTIONS FOR WEDDING PRESENTS (<i>Coloured</i>) - - -	268

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CHOICE OF A CAREER.

ISALAF JUNG BAHADUR

I. OCCUPATIONS FOR MEN.

An attempt will be made in this article to indicate the chief occupations open to men, and the means of entry thereto; but it will be impossible, within the space available, to treat in detail concerning the occupations of artisans and other manual workers.

In order to fit boys for life's battle a good education is necessary. A school education, of course, is not everything; many of the most successful men have done well without it. A good early education, however, gives a boy a long start on the road to success, and the habits of work formed, and breadth of mind acquired, exercise the most beneficial influence in later life. If a boy can be kept at school till seventeen or more, so much the better. The minds of many boys do not seem to assimilate knowledge easily till the "teens" are reached. But whether they leave at fourteen or seventeen, it is a great mistake to let them drop all studies and give up all their spare time to amusements. After the general education is over, the special should begin. This should comprise daily work, together with evening instruction based on some aspect of that work, such as can be acquired in classes or in private study. In general, boys go into life at three periods—say fourteen or fifteen, seventeen or eighteen, twenty-two or twenty-three (after a university course). It is quite possible for those who leave first to equal or even surpass those who leave last, if they use properly their opportunities of acquiring knowledge. Owing to early habits of work they may, in many respects, be better trained than those who start under apparently happier auspices.

Nothing is more foolish than to imagine that education is an affair of books alone, or of school or university alone. Such education requires to be supplemented by varied experience and by private study. In fact, education should end only with life. Elementary education is now free to all, and by means of scholarships it is possible for any clever boy to attain the highest honours a university can bestow.

The question of the choice of a career should be kept before a youth, but not pressed forward too prominently. Apparently the choice is limitless, but in practice it is much circumscribed by home influence and surroundings, and by education, health, and financial considerations. A boy should be allowed to follow his bent, provided he is not obviously unfit to

make a choice. The various openings should be indicated, and suggestions made, but parents should not decide for their son against his inclination.

The interdependence of the various branches of knowledge is now so close that men who started as working carpenters have, by means of thorough study of the principles of science, become lecturers or architects of repute, while stone-masons have become sculptors and members of the Royal Academy. Snobbery and caste feeling have ruined many lives. To force a musical boy to become a barrister is to spoil a good organist or a great composer; to force an artist to become an engineer is probably to injure the boy and rob the world.

Information as to the regulations of institutions for study can be obtained on application to the secretaries. The fees at universities for degrees and tuition vary very much, and the same may be said of those at training institutions of all sorts. A minimum sum for board and lodging in London would be £60 per annum, in the country £50. To this amount about £10 for books, &c., must be added, and probably as much for minor personal expenses. The fees for examinations and tuition would be spread over several years. The secretaries of institutions can usually recommend suitable places for residence.

Anyone who contemplates emigration should apply to the Colonial Office in London, or to the agent-general in London of the colony to which he desires to go. He should also buy the pamphlets issued by the Emigrants' Information Office, 31 Broadway, London, at a price of a few pence.

Accountants.—The working of businesses on a large scale, especially with a number of branches, and the growth of limited liability companies, have led to a great demand for trained accountants. Two bodies of accountants in London hold examinations for admission to their ranks, viz. the Institute of Chartered Accountants, and the Society of Accountants and Auditors, and there is a similar Scottish body, the Society of Accountants of Edinburgh (with one or two others). Anyone can act as a public accountant and call himself such without membership of any society, but it is better to enter the profession as an articled pupil on payment of a premium, say from £70 to £150. To become a member of the institute a three to five years' term must be served under a chartered accountant. One can become a member of the other bodies on similar or on somewhat less onerous terms. The societies hold examinations in law, book-keeping, and other subjects connected with the profession. The rate of pay for assistants varies from £70 to £300, or much more for accountants to public bodies or companies. The duties of an accountant give him a knowledge of many trades and business methods. He is especially concerned with the manipulation of figures and the preparation of balance-sheets. There is a great demand for accountants of good character, and such men may make very large incomes in private practice.

Actors.—No one ought to enter the theatrical profession unless he is determined to work hard and to study. Preliminary experience can be obtained in amateur theatricals, local dramatic societies, &c. Aspirants

should study in some elocution class or take private lessons in elocution. Advertisements in good professional papers, such as the *Era* or the *Stage*, will show students where tuition can be obtained, or what openings are available. Study of all sorts of minor "stage business" is necessary for a proper appearance "on the boards". The pay of a "super", or of a "general utility" man, is from 20s. to 30s. a week. A fair average actor receives from £3 to £5 per week. Successful actors earn from £20 to £300 per week. Payment is not by the year but by the run of the piece, in the absence of special arrangement. In plays in modern costume actors find their own clothes. In "starring" companies travelling expenses are usually paid.

Actuaries.—Anyone interested in mathematics, and in their practical application to commercial life, would have good prospects as an actuary, or adviser of insurance companies, &c., as to safe-risks, premiums, &c. The examinations of the Institute of Actuaries, England, or the Faculty of Actuaries, Scotland, should be passed; the fees are a few guineas, but the examinations in pure mathematics are very searching. Clerks in insurance offices, with a taste for such work, and knowledge of the practical application, occasionally pass the examination. The income of an actuary ranges from £600 to £2000.

Agriculture, &c.—*Farmers* require agricultural education, which can be obtained at a number of colleges scattered over the British Isles. A full list can be obtained on application to the Board of Agriculture in London or in Dublin, and the reader should refer also to what has been said in an earlier section regarding the teaching of agriculture, &c. In these institutions regular instruction in all agricultural matters can be obtained for short or long periods, but this should be supplemented by practical instruction and actual work upon a farm. For such training a premium is generally required, varying according to style of living from £30 to £50 on small farms, and from £100 to £300 on larger ones. The capital needed by a person becoming the tenant of a farm varies in Britain from, say, £6 to £12 per acre. Proximity to a town affects rents and profits; and localities differ greatly in regard to soil, climate, markets, &c. There are now many farmer-specialists who confine their attention to one branch—dairy-farming, horse-breeding, grazing, poultry-farming, to which may be added, for certain districts, fruit-culture or hop-growing. The "small articles" of a farm, such as pigs, poultry, and fruit, generally obtain a ready sale. Too little attention is paid in the British Isles to small culture, consequently much food is imported into Britain from the Continent which might as well be grown at home. The Agricultural Departments in Britain and Ireland have been formed in order to assist farmers with advice and information, and enquiries are answered in much detail.

Horticulturists can obtain special training in the agricultural colleges, and with capital can open a shop in a town, or they can sell their products in the market to some regular buyer. *Land Agents* can be trained

partly at an agricultural college, and should pass the examinations of the Surveyors' Institution, London. They can become pupils of private gentlemen at fees ranging from £150 to £250 per annum. They find work on large properties as managers, and may combine farming with such employment. *Bailiffs* are usually, but not always, selected from intelligent labourers. *Land Surveyors and Valuers*, and *Auctioneers and Appraisers*, are to be found in all rural districts; they usually enter as clerks with or without a premium; in the latter case apprenticeship articles are generally entered into. A country worker of this type usually holds also an auctioneer's license, and if he is a smart business man he has wide chances of successful work in house and estate agency business. The premium ranges from 30 guineas upwards, with or without salary. Payment is made by fees on a more or less fixed scale, but special arrangements can be entered into. A useful examination to pass for such an occupation is that of the Surveyors' Institution. *Teachers* are employed in the classes now being opened for technical instruction in agriculture. They should have had a scientific training and some practical experience. Posts are open to them in connection with creameries and cheese factories and other similar places; the best become specialists as chemists or analysts. *Brewers* are now becoming increasingly scientific. To begin in such a business a huge capital is usually required. Pupils can enter a brewery on paying a premium, say from £200 upwards, or can study in some technical institute or under a chemist. Excellently-paid posts are then obtainable in some established breweries. *Millers*.—Small country mills are tending to disappear, but where they are left a boy can usually enter as a clerk, or on payment of a premium. He can then take a situation in some of the large mills now established in the ports where foreign corn is ground, and rise to superintending posts, or start business for himself.

Analysts.—The increasing use of chemical knowledge in all industries has gradually led to the recognition of analytical chemistry as a separate profession. The necessary training can be obtained either by paying a premium to a chemist and working in his laboratory, or by study at a technical institution. The fee for three years' apprenticeship would be about £100; the cost of education at a technical college would in many cases be less, but the best course, viz. that at the Royal College of Science, London, costs about £120. There are suitable technical colleges now in all great towns, and study in these is undoubtedly the best. A student can, after his course, go into private laboratories as a paid assistant at from £80 to £150 per annum, and higher posts at from £300 to £500. Successful analysts in private practice make much larger incomes, and teaching work may be undertaken if it be desired to supplement the income. Trained chemists are now employed in many large manufactories.

Architects.—The profession can be entered from the purely artistic side, as after a course in the Royal Academy schools (London), or from the practical and commercial side, as when builders and surveyors style

themselves architects. In either case a period of study at some recognized school of art is essential, combined with work as a pupil in the office of some architect, or builder and surveyor. The examinations of the Royal Institute of British Architects should be taken if possible; full particulars and the names of members can be obtained from the offices in London. The premium ranges from £30 to £300, and the study period should cover at least five years. The pay of a draughtsman ranges from 20s. to £1, 10s.; of an assistant from £3 to £5 per week. An architect is paid by a commission on the value of the works in course of erection under his supervision. He may also make an income as a valuer. A number of appointments under local governing bodies and under Government are open to architects. The pay under the former varies from £200 to £1000 per annum. The range of the Government posts (Office of Works) is similar. Information can be obtained from the Civil Service Commission, London.

Army.—The usual mode of entry into the commissioned ranks of the army is by open competition. Success entitles the cadet to admission to the Royal Military College, Sandhurst, if he is training for cavalry or infantry, or to the Royal Military Academy, Woolwich, for Royal Engineers or Royal Artillery. Candidates must be duly qualified before being allowed to compete; otherwise they may have to pass a "qualifying examination".

The compulsory subjects of the competitive examination are English, French or German: two optional subjects may also be selected from seven other subjects. The competition is keen, but no well-trained youth need fear to enter. The limits of age are from eighteen to nineteen and a half years in the case of both institutions. The examinations are held twice a year, and all applications concerning them must be addressed to the Civil Service Commissioners, Burlington Gardens, London. There is a standard height and chest measurement, and the medical examination is very strict. Certain relaxations in the examination regulations are permitted for King's Cadets, &c., nominated by the War Office from the sons of officers who are killed in action, or who have died of wounds, and have left their families in financial straits. The total cost of education at either institution is at least £200. The charges made vary in amount according as the student is the son of a private gentleman or of an officer. A King's Cadet pays nothing. Cadets receive pay, which, however, is credited as a set-off against their messing and other expenses. Instruction is given in strictly military subjects and in others bearing upon them. Cadets select their branch of the service before competition. Scientific students usually choose the Engineers or the Artillery. Those who can afford the expense often choose the Cavalry. The corps which has most opportunity of foreign service, either military or civil, in peace or war, is the Engineers. Further military education can be obtained, after entry into the army, in the Staff College.

In the Artillery and Engineers officers may be able to live on their pay, but it is difficult for junior officers to do so even in those corps.

An officer should have some private means, if only £50 per annum. It may be said, indeed, that the minimum private income should be from £100 to £200 in the dismounted services, and £300 in the mounted. The Government makes some contribution to mess expenses, but this is never sufficient; and, of course, there are many minor expenses incidental to an officer's social duties. The cost of uniform is also a considerable item of expense. In the Cavalry a minimum of £300 is required; in Highland regiments about £120; in the scientific corps from £80 to £100; in the Infantry about £70. An officer has to contribute to the maintenance of the band. He has to find his own horses, but the Government provide keep for a certain number. He enjoys free furnished quarters, and a soldier servant is appointed for his use. Travelling expenses are paid by the Government.

An officer's pay varies with his rank and the branch in which he serves. In the Infantry a second lieutenant gets 5s. 3d. per day. This amount is increased in other corps, and rises to 9s. 7d. in the Engineers. A captain's pay similarly varies from 11s. 7d. to 19s. 7d. per day. The highest-paid colonels are in the Engineers, with about £700 per annum. A general receives about £3000 per annum. On active service and in India extra allowances are given. An officer rises to captain's rank in peace time in from eight to ten years after entry.

Officers in educational appointments, and in the Army Service Corps, the Army Ordnance Department, the Pay Department, and the Army Medical Service are better paid than those in the fighting line. They can live on their pay.

Army Doctors must obtain a post in open competition. They must be qualified in medicine and surgery—that is, must possess such qualifications as would admit of their being put upon the medical register—and be between the ages twenty-one and twenty-eight. The fee for the competition is £1. Information as to examinations can be obtained from the Civil Service Commission. A lieutenant starts with £255 per annum, and may become surgeon-general or director-general with £1500.

Army Veterinary Surgeons enter by competition, and must be between twenty-one and twenty-seven, and graduates of the Veterinary College, London. They receive £250 per annum on appointment, and may rise to £1200.

Army Chaplains are appointed by the War Office after selection. The age limits are twenty-seven and thirty-five. They must have served for three years as priests. The pay ranges from about £220 to about £400 per annum.

All officers receive a pension on retirement ranging from £120 to £1000 per annum, and obtainable after fifteen years' service; or they can compound for a gratuity ranging from £1200 upwards.

Indian Army Officers.—The Indian army affords excellent opportunities of pay and promotion for those willing to live in India, to learn a native language, and to command native troops. An officer must decide

before entering Sandhurst; on leaving, he will be attached to a British regiment in India, from which he is transferred to his Indian regiment. He can easily live on his pay, as he starts at £300 per annum in the Infantry; in fact he receives about three times as much as an officer in the British Army. His pension is high, and his family are pensioned also.

Retired army officers are eligible for various important appointments, such, for instance, as that of chief constable in a county or borough, with an annual salary of, say, £450 to £1000.

Non-commissioned Officers.—These are promoted from the ranks; they are better off and enjoy better prospects than the average clerk, receiving as pay from 5s. to 8s. per day. A non-commissioned officer may receive a commission as quarter-master, getting from 9s. to 16s. 6d. per day.

Various appointments at home and abroad for retired soldiers can often be obtained with good pay. They are often employed, for instance, in connection with volunteer corps, and many occupy responsible positions as *commissionaires*. Full information will be found in a pamphlet supplied gratis at any Post Office.

Army Schoolmasters must be between twenty and twenty-four years of age. They receive from 6s. 6d. to 7s. per day, exclusive of living and other expenses.

Competitive examinations are held for the *Royal Irish Constabulary*, a semi-military body—pay of inspectors from £125 to £500 per annum. The *Indian Police Force* offers almost as good a scope as the Indian army. Admission is by competitive examination. Particulars can be obtained from the Civil Service Commissioners. Colonial police forces are filled locally or by the Colonial Office, London.

Artists.—Before anyone adopts art as his profession a marked predilection should be shown. Training can be procured in art classes or art schools, of which there are now a great number. In these, instruction can be obtained for a few shillings per term in evening classes, or for a few guineas for day tuition.

The best students are attracted to the Royal Academy Schools, Burlington House, London, or to the Royal College of Art, South Kensington. The fullest information is contained in the prospectuses issued by those institutions. The advantages offered in free tuition, scholarships, &c., are very great, but many artists think that the training is not so free and wide as is desirable. It tends to stereotype the methods, and at South Kensington too much attention is alleged to be paid to the purely decorative and commercial side of art—not a bad thing, however, if a person has to earn a living by his pencil. In “South Kensington” classes, whether local or otherwise, the idea is to train art teachers and designers for manufacturing purposes. In the Academy schools, painting, engraving, sculpture, and architecture, in their highest branches, are all taught.

Art schools of high excellence exist in various cities of the United Kingdom. To obtain a wider education as an artist, however, it is advisable to study abroad—in Paris, Antwerp, Florence, or some similar

centre. In Antwerp instruction is gratuitous, and the cost of living need not exceed £1 per week. In all these cities suitable board and lodging can readily be obtained *en pension*, and a minimum of £70 per annum ought to cover all charges. An artist, like a literary man, must never be tired of producing and submitting his work. He must get known, either by exhibitions or by illustration work. He should not specialize too much, at first at any rate. He will thus be prevented from becoming "groovy". Picture-selling is certainly not the most paying business for an unknown artist. He should get known by illustrations in the picture-papers, comic or otherwise, or by illustrating the letterpress of books. Pen-work, or wash-work, is constantly being required by the magazines or newspapers. Every artist should know something of photography. Paintings, whether in oils or in water-colours, vary greatly in price. A good average amount for a man beginning to be known would be from £5 to £20 for a picture. Well-known artists obtain prices ranging from £50 to £1000. Small sketches for illustrations fetch from 5s. to £1 each, larger ones from £2 or £3 to £10 or more. Many beginners take pupils, or hold posts as art-masters. A person with literary and artistic talent may combine authorship and work with the brush. A studio is usually necessary: it can often be shared with artist friends.

Sculptors must have been trained as already stated, and the general remarks as to artists equally apply to them.

Designers form a link between the purely artistic and purely commercial worlds. In this branch, and in *illustrating*, the work is probably more remunerative and continuous than in any other artistic employment. The demand for new designs and new illustrations is insatiable and increasing. Originality and beauty are the great features of successful designs for all sorts of manufactures, from oil-cloth to silk scarves. After a preliminary art course it is well to serve as a pupil to some artist in this branch; a premium has to be paid. Incomes from £100 to £1000 per annum can be made at such work.

Engraving, etching, and lithography are still important callings, although the new photo-processes are, to a great extent, superseding these branches of art. They can be studied in technical classes, particularly in the County Council School, Bolt Court, London; or by apprenticeship.

Photography has now become a recognized branch of art, and may be learnt by apprenticeship or in technical classes. The capital required to set up a photographic studio is not large. There are various minor occupations in photographic work, bringing in from 25s. to £3 per week.

Wood-carving, particularly if really artistic, will be found to command fair prices; so also will tasteful and finished *bookbinding*. *Drawing plans, plan-tracing, glass-painting, china-painting, Christmas-card preparation, painting on satin, fans, leather, &c.*, are a few of the many minor artistic occupations which will afford a living, or act as a crutch.

Auctioneers.—The business of the auctioneer can be learnt in two ways: either by paying a premium to some well-established auctioneer, or

by entering his employment as a clerk, and gradually acquiring the necessary knowledge. A premium varies from £50 to £100, more or less, for three years' articles: a small salary is usually paid to the learner. During this period he should prepare himself for the examinations of the Auctioneers' Institute, Chancery Lane, London, which include law and technical subjects. Before practising as an auctioneer a Government license at £10 must be taken out. If it be simply desired to act as a valuer, the fee is £2, or as a house agent £2, but the auctioneer's fee includes both of these. An auctioneer can enter into business as an assistant to some other firm, or can start for himself. The capital required is small. Rent and living expenses for a few years would suffice. Of course some connection is essential, unless one is bought. A beginner should select a rising neighbourhood, of which there are so many near large towns. An auctioneer of repute can earn money as a rent-collector, valuer, and arbitrator (see also under "Agriculture" for *Land Agent, &c.*).

Builders.—The general training already described under "Artists" and "Architects" applies to Builders. They require more practical knowledge, particularly on the business side. Many jobbing builders are merely workmen who have a little capital and do odd work as offered to them, and employ a few labourers. Other builders with capital have large works and numbers of employes. The theory in general is that the builder works under the supervision of the architect, who represents the client's interests. He is, in fact, the latter's professional watch-dog. In small works one man does the whole of the designing and supervising work. For anyone who learns the trade as an apprentice, and has artistic and business qualities, there are many openings. A number of Government posts are open to those who have practical building experience. Application should be made to the Civil Service Commissioners.

Civil Service (Home).—The term Civil Servant comprises a very large number of persons in Government employment, especially clerks and others connected with the collection of the revenue, the Post Office, Local Government, &c. Civil Service employment offers many attractions, such as certainty, non-requirement of capital, short hours, fairly light work. The disadvantages are monotony and routine, and few chances of bettering position except in the usual course of promotion. The hours of clerks are usually seven. The Saturday half-holiday is usually allowed. The amount of annual leave ranges from fourteen days to one month; higher officials get six weeks or even more. In cases of sickness, leave of absence on full pay is allowed up to a period of six months, and on half-pay for another six months. All Civil Servants are entitled to pensions at the rate of $\frac{1}{10}$ th for every year of service. After forty years' service the maximum pension of $\frac{1}{3}$ ths = $\frac{2}{3}$ of the current rate of pay can be obtained. Almost all Civil Service appointments are filled by open competitive examinations conducted by the Civil Service Commissioners, Burlington Gardens, London, W., from whom information as to regulations can be obtained. Particulars of forthcoming examinations are advertised in the *London Gazette*, and

the principal daily papers, usually on a Thursday. The best way, however, to find out easily what examinations are coming on, is to subscribe to the paper published weekly by some Civil Service "coach", such as the *Civil Service Candidate*, the organ of the Civil Service Department of King's College, London. All candidates must be natural-born British subjects, and must be within the prescribed limits of age. Those already in the Government Service are, however, allowed certain deductions in this respect. The health and character of each candidate must be sound, and strict enquiry is made into each before appointment. Full information as to possible health disqualifications can be obtained from the Civil Service Commissioners. Specimen examination papers can also be obtained from the Government printers. In many examinations the standard is very high, though the subjects are apparently simple. A brief summary of information as to some of the chief employments follows; but the Civil Service is so extensive, has so many ramifications and complications, and the arrangements as to appointments and pay are so diverse that some of the publications on the subject, such as the *Civil Service Year Book*, would require to be consulted.

Clerkships, First Division ("Class I").—Subjects similar to those for a university degree; university education almost essential; about a dozen appointments every year; particulars of pay and prospects published before each examination; pay at start varies from £150 to £200 according to department, advances by increments of £15 or more to £500, and thence to £1000 or £1500; age limits, twenty-two to twenty-four; fee, £6.

Second Division Clerks.—Appointments, principally in the offices in London (the larger number in the Post Office). Marks are given for handwriting, English composition, arithmetic, précis, languages, mathematics, book-keeping, &c.; a hundred or so appointments every year; initial salary £70 per annum, increasing by £5 per annum to £100, then if efficient by £7, 10s. to £190, then by £10 to £250, then by £10 to £350. In the last stage the Second Division Clerk is described as a Higher-grade Clerk. Promotions to First Division may be made after eight years' service. There are staff posts ranging up to £500; age limits, seventeen to twenty; fee, £2. Comparatively few clerks of Class I. are employed; in most departments there are openings for clerks of the Second Division, but competition is keen.

Excise Officers.—Officers of Inland Revenue employed all over the United Kingdom at breweries and distilleries; subjects, ordinary English, with mathematics and elementary chemistry; fee, £1; age limits, nineteen and twenty-two, unmarried and no family; commencing salary of assistants of Excise about £90 per annum, rising to £250 as assistant supervisors, £400 as supervisors, and thence to £800 as collectors. Interdepartmental examinations have to be passed for promotion.

Excise Clerkships can be obtained by *Excise Assistants* after one year's service; work indoor.

Customs Officers.—Serve at ports of United Kingdom in collecting

Customs Duties, &c.; general regulations (for Assistants) resemble those for Excise, but age limits are eighteen and twenty-one—a standard height, &c., is fixed; pay £70, rising, for examining officers, surveyors, &c., to £340, £600, &c. There are also clerks for port service; age limits, seventeen and twenty.

Surveyors of Taxes.—Officials connected with that department of the Inland Revenue which collects the Income Tax. Examination for Assistant Surveyor similar in character to that of Second Division Clerk; fee, £6; pay, £100 to £600 and £700 (as Inspector).

Another branch of the Inland Revenue is the Estate Duty Office, in which a large staff of clerks is employed at salaries from £150 to £800.

Prison Clerks.—In the prisons; examination and pay resemble the Second Division Scheme.

Patent Office Examiners.—Examination chiefly scientific; fee, £6; pay, £200 to £360, and higher posts; age, twenty to twenty-five.

Local Government Board.—This department, besides employing a large number of clerks, employs a great many officials possessed of technical or special knowledge, including auditors (provincial and other), medical inspectors, engineering inspectors, &c., with salaries of £500 to £800.

Museum Assistants.—Nomination required; technical examination; age, eighteen to thirty; fees, £1 to £4; pay, £150 to £500, &c.

Admiralty Dockyard Posts.—Similar examination to that for First Division, but not so severe; age, eighteen to nineteen and a half; fee, £3; pay, £100 to £350, thence to £500 and £850. Dockyard Writers are entered locally for service; age, nineteen to thirty; pay, 4s. to 11s. per day.

War Office.—Similar to above appointments on Admiralty, those successful entering the accounts or other departments.

Boy Clerks.—Similar examination to the Second Division, but easier; age limits, fifteen to seventeen; pay, 15s. to 18s. per week; service terminates at twenty. Useful post for study for a higher appointment, the one immediately higher being that of *Assistant Clerk*; age nineteen to twenty-one; pay, £55 to £150.

Postal Appointments.—Appointments are of the most varied character, the departments being numerous. Many higher quasi-technical appointments, such as those of Surveyor, &c., are filled by interdepartmental competition among Clerks, Sorters, and other employés; posts from £100 to £1000; age limits and scales of pay vary greatly. Sorters and postmen are the most numerous classes employed, starting at wages of 18s. a week.

Inspectors of Factories and Mines and Inspector's Assistants.—Nominated by Home Secretary, or appointed by limited competition, largely scientific or technical; age, twenty-one to thirty; pay, £100 to £1200. A number of other technical appointments are made at irregular intervals as occasion requires.

Local Governing Bodies—Clerkships in London County Council, Metropolitan Asylums Board, &c.—Similar examinations, pay, and con-

ditions of service to those of Second Division Clerks in the Civil Service. For other clerical and technical employment under local governing bodies application should be made to the secretary of the local authority.

Civil Service (Indian, Colonial, &c.).—*Indian Civil Service.*—Possibly the finest appointments in the world; age from twenty-two to twenty-four; examination, &c., same as that for Home Clerks, Class I., see above; pay, £300 to £3000 per annum, but usually very hard work and trying climate and conditions.

Eastern Cadets.—Colonial service; same examination as for Indian Civil Service, but appointments less valuable. *Diplomatic Appointments*—similar to First Division Clerks, but Foreign Office nomination required. *Student Interpreters in the East and Far East*—similar to Eastern Cadet-ships. Further information as to these and all other Colonial appointments can be obtained *gratis* on application to the Civil Service Commissioners, or the Foreign, India, or Colonial Office—all in London.

Clerks and Commercial Employés.—This term is a very general one, and includes a vast number of people, some doing mere “quill-driving” on very small pay, and others, most important and well-remunerated work.

There is an unfortunate tendency among certain classes to regard the position of a clerk as more “genteel” than that of a skilled mechanic or artisan. Hence the clerical market is flooded with numbers of people with untrained minds, with a smattering of business knowledge and ordinary office routine. There are doubtless many excellent opportunities of advancement for clerks, but only because they cease to be clerks pure and simple, and get to know the details of some business, hence acquiring a quasi-technical knowledge. Those who enter an office as clerks have certainly a good chance of thus acquiring knowledge and business experience, but in these days of large businesses, with many departments, the tendency is for a boy to enter one branch, learn that alone, and then not to move about in that business or in any other, but to sit on a stool and do routine work. Such results as these should be carefully guarded against. A clerk should learn a foreign language, shorthand or type-writing, or both, and book-keeping, and should especially endeavour to master the “ins and outs” of his particular occupation.

It is very difficult within the limits of space available to give much information as to the various careers open to clerks. The main classifications are: (1) those in banks, insurance offices, railway clearing-houses, and the majority of limited liability companies; (2) those in the offices of merchants, particularly those who buy and sell on the produce or other “exchanges”; (3) all those miscellaneous workers “in the city”, in “offices” where commercial business is done; (4) those acting as clerical assistants to professional men, such as lawyers’ clerks, engineers’ clerks, &c.

Those in Class 1 have the greatest certainty of employment of a light and possibly congenial nature. A nomination from some official is usually required, or direct application should be made, as such posts

are seldom advertised. Entrants are usually required to pass some qualifying or competitive examination in ordinary "English" subjects. The salaries of juniors commence at from £25 to £40: the highest pay is attainable in banks or similar businesses. The pay rises to £70 or £80, and thence to £150; above these rates there are posts up to £250 and £300, and of course a number of higher superintending posts, say up to £700 and £2000 per annum. Where there are a number of branches there are more responsible and better-paid posts. The higher posts are often filled by capitalists (see under Traders), or accountants (*q.v.*), or actuaries (*q.v.*).

The hours are regular, the work not hard, and the conditions of life not unlike those in a Government Office (see "Civil Service"). Pensions are often granted. In fact such a clerk enters an office as a youth (there is generally a limit of age), and, if he behaves himself, remains there for life.

Clerks comprised under Class 2 are employed in the offices of agents or brokers, who buy and sell on the "exchanges", where so much modern business is conducted. Such clerks include those in the offices of stock-brokers, Lloyd's Marine Insurance Brokers, or of "produce-brokers", who buy and sell in such exchanges as the Baltic or Mincing Lane in London, or those in Liverpool, Glasgow, &c.

The pay is similar to that of bank clerks, but in these posts there are opportunities of making more money by earning commissions on business done. They are freer, and have more chances, but there is less certainty. Like commercial travellers (*q.v.*), these clerks have many opportunities of getting to know people in the same line of business, and hence of starting in business for themselves.

Clerks comprised in Class 3 approximate to the "mere clerk" type. They know a little book-keeping, a little office routine, and something of business methods generally. They start as office-boys or "juniors", usually from middle-class or public elementary schools, at 5s. or 6s. per week, and rise in time to 30s. or 35s. per week. Those fairly successful get posts at £120 or £150 or more per annum. Many such posts are obtainable in the offices referred to under Class 2. If these clerks know type-writing and shorthand, or both, their value is at once increased by 10s. or more per week, because then they have some quasi-technical knowledge. £150 is quite a usual salary. The best of such clerks become *Book-keepers* or *Cashiers*, and then, being employed on responsible work, their value is proportionately increased, say up to £300 per annum or more.

As to the Clerks of Class 4, the conditions of life and the rates of pay are similar to those detailed in Class 3. If the clerks of professional men display business capacity and intelligence, they gradually pick up much technical knowledge. This they can supplement and improve, and if they can pass the various professional examinations they may become fully qualified. Means of study can be found in the evening classes in

Polytechnics, &c., in large towns. (As to the different occupations see under "Engineer", "Lawyer", "Auctioneer", &c.) If they do not so qualify, they tend to gravitate to such posts as described under Class 3.

Commercial Travellers.—These are usually recruited from clerks in the counting-house of some firm, or from assistants in the different departments. Such men have gradually acquired a knowledge of the business and of the customers of the firm. But it is by no means necessary to have gone through the mill in this fashion. Many successful "commercials" have taken to "the road" owing to want of success in other walks of life, or from desire for travel and change. The life is a trying one, but it is free and independent and full of variety. There are more than the usual business temptations, owing to opportunities for drink or for handling money. Commercial travellers are either paid by fixed salary and expenses, or by commission only, with perhaps an allowance for expenses. A fair average salary is from £100 to £300 per annum, but really good travellers can command much more, say up to £1000 per annum. The allowance for travelling and living expenses varies—sometimes travelling alone is allowed; from 15s. to £1 per day would be a usual rate, unless exact expenses only were allowed. A large number of commercial travellers are employed abroad, and the tendency in business circles is to employ in such work Englishmen who know foreign languages. Such men are, in fact, in demand. A commercial traveller has excellent opportunities of going into business for himself.

Engineers.—The engineering profession can now be entered in two different ways, either by apprenticeship or by studying at some technical institution. By the former method a premium must be paid to a suitable firm, and an apprenticeship served for three to five years. By the latter method that period of time must be passed in study at some institution fitted with engineering laboratories and a workshop in which the necessary practical experience can be gained. This method is rapidly supplanting apprenticeship. It is less expensive, and gives much better results, because the student is trained in theory and practice by efficient teachers, and is not left to his own devices as in some big works.

The usual premium is from 100 to 300 guineas, partly returnable in wages. The fees at an institution would amount to about £50. Suitable training-colleges are now to be found in all great towns. Lists of firms who take apprentices can be obtained from the secretaries of the great engineering societies, or advertisements can be seen in the chief engineering papers. After his period of study, the young engineer should enter the employment of some firm as an "improver", at a salary of about £2 per week. He should then be ready to take a post as an assistant engineer. There are many such appointments at home and abroad, from great works such as railways, canals, and buildings. Pay ranges from £80 to £300, and for higher ones from £500 to £1000 and more. Valuable permanent posts are to be found with town corporations and at great

manufactories. Engineers are employed in many Government departments, especially the Indian Telegraph Service, Irish Works, Post Office, and Army and Navy. Information can be obtained from the Civil Service Commissioners and India and Colonial Offices.

It is necessary for a student to decide whether he will become a civil engineer, *i.e.* one employed on great contracting works, whose duties sometimes border on those of a surveyor (*q.v.*), or whether he will settle down to machinery as an electrical or mechanical engineer. The training for the two latter is very much the same. There is a great demand for well-trained electrical engineers.

Lawyers, &c.—*Barristers* in England and Ireland are those who practise in the superior courts of law, but they may appear also in the inferior courts. A university education is desirable but not necessary. Graduates, however, have certain privileges in exemption from some examinations, and in “keeping terms” with less trouble. All intending barristers must become members of one of the Inns of Court: in England—Middle Temple, Inner Temple, Lincoln’s Inn, Gray’s Inn; in Ireland, King’s Inn, Dublin. These Inns bear the same relation to a theoretical legal university as the colleges at Oxford or Cambridge do to the university in those cities. The student must pass a preliminary examination and generally enters that Inn in which he has friends. The fees at each English Inn are about the same: certain fees have to be paid on admission and others on call to the bar. The total is about £140 at any Inn; in Dublin, about £150. The payment of these fees entitles the student to the use of the Inn Library and to free attendance at lectures. He must then “keep” twelve terms, spread over a period of three years or more. “Keeping terms” in England is done by eating a certain number of dinners in the Common Hall; in Ireland, by eating dinners and by attending lectures as well. Such attendance is not compulsory in England, but in neither country can anyone be “called”, *i.e.* become a barrister, until he has passed certain examinations in legal subjects, including Roman Law and English Law in all its main divisions. There is no fixed time for passing the examinations. Certain relaxations in the regulations are made for solicitors wishing to become barristers, or for Irish and some colonial barristers. Valuable studentships are open to competition by students who join the Inns before the age of twenty-five. Full information may be obtained on application to the registrar of any Inn named. In order to obtain the necessary practical knowledge in dealing with cases, a student must read in the chambers of some practitioner. The usual period is one year, but it may vary from six months to two years. The fee is 100 guineas for one year. It is best to read with a busy “junior”. Students generally enter at the bar at from twenty-three to thirty years of age. After call they usually elect between practice in common law or in chancery. Books and other expenses amount to about £60.

Success at the bar is largely dependent upon fluency of speech and quickness of thought, but these are by no means the only conditions. The

work is very irregular, and the "grind" often hard, while the period of waiting for employment is probably more trying than in any other profession, because work comes not from the public but from solicitors. The mere call to the bar does not ensure work. No one should become a barrister who cannot command about £200 a year for several years at least. The average barrister in practice makes £200 to £400 per annum: a successful man £1000 or more: the very successful make enormous incomes. A number of the last-named become King's Counsel, and then command higher fees and do less drudgery. The Government appointments open to barristers are good, and range from £1000 to £2000 up to £8000 as Lord Chief Justice. Very valuable Colonial and Indian appointments are also made by the secretaries of the respective departments.

In Scotland *Advocate* is the name given to barristers. All these have to be admitted to the Faculty of Advocates at Edinburgh, from which full information can be obtained. The general course is similar to that in England. The total fees are about £300.

Solicitors in England and Ireland attend to the detailed work of law, especially in relation to the public, and they conduct cases in the lower courts. They have to pass examinations held by the Incorporated Law Societies in London or Dublin, from whom details can be obtained. The subjects are similar to those for the bar. Anyone intending to become a solicitor must also be articled for five years (or three if a graduate). A premium of from 100 to 200 guineas is required; a stamp of £80 must be placed upon the articles. During the apprenticeship two examinations in legal matters must be passed; fees £8. The solicitor's certificate costs £30, and an annual fee has to be paid while he is in practice. The average income is about the same as that of a barrister; the most successful men probably make less, but it is easier to get into practice as a solicitor than as a barrister. The methods are more business-like, and the solicitor comes into close touch with the public. Solicitors can also take posts as managing-clerks with other solicitors, or can enter into partnership. In Scotland the solicitors or "law agents" comprise two important societies in Edinburgh, namely the *Writers to the Signet* and the *Solicitors in the Supreme Courts*, each with special terms of admission, entrance fees, &c., regarding which information can easily be obtained. For ordinary *Law Agents* there is a Board of Examiners in Edinburgh, who will give full information. Law agents, often called "writers", practise chiefly before the Sheriff Courts in the different counties. The total fees are about £70. The general course of training, examinations, and career are as already detailed for solicitors in England.

A *Notary*, who usually is also a solicitor, must have been articled to a notary. His fees are about £40. The central office is the Faculty Office, Knightrider Street, London.

A *Patent Agent* acts as the agent of those who desire to take out patents. The profession is controlled by the Institute of Patent Agents, London. Entrants are usually articled like solicitors; examinations must

be passed in patent law and practice, and all patent agents must be registered.

Marines (Royal).—Entry for commissions by open competition; age, eighteen to nineteen and a half; particulars obtained from the Civil Service Commissioners. Commissions are obtainable either in the artillery or infantry. The general conditions of service are the same as for the army, but service afloat is much less expensive than service ashore, and in this respect a marine officer's life resembles that of a naval officer. The cost while training at the Royal Naval College is about £80 per annum. The rates of pay vary from £95 for a lieutenant to £730 for a colonel.

Medical Profession.—The necessary qualification for study as a doctor can be obtained by graduation at a university in the medical faculty, or by studying at some hospital and then passing the examinations of the Royal College of Physicians or Surgeons, or all these methods may be pursued. Prior to entry upon such a course, students must register themselves at the offices of the General Medical Council, in London, Edinburgh, or Dublin, and must pass the medical preliminary in ordinary English subjects, &c., or show evidences by certificates of a good general education. A list of certificates which will be accepted can be obtained on application to the Council. Study should be commenced at about seventeen or eighteen years of age, but many enter much later. Great care must be exercised as to the choice of a hospital for study. The fullest information on these and other points will be found in the student's number of the *Lancet*, published annually in September, price 7d. Five years must be spent in the medical schools, &c., at a total cost for tuition fees of 90 to 150 guineas. The examination fees and the fee to the General Medical Council are additional. Remunerative work is begun at from twenty-three to twenty-eight years of age. The lowest class of such work is that of the unqualified assistant, whose pay indoors is from £30 to £60, outdoors from £60 to £100. Qualified men take minor hospital appointments at pay of from £40 to £80 per annum, with board and lodging, or as resident medical officer at £150 to £250. By these means the necessary experience and practice are gained. The usual course is then to become a general practitioner, unless the doctor remains attached to a hospital or becomes a specialist. The price of an average practice ranges from one to three years' income; from £500 to £1000 would be required. If it is intended to work up a practice *ab ovo*, a new district should be selected. Many appointments as medical officers, consulting surgeons, &c., are open to medical men either at fees or fixed rates of salary. Information as to army and navy surgeons is given under those heads. There are valuable appointments in the Indian Medical Service (entered by competition) ranging from about £250 per annum for lieutenants to £2000 for the higher ranks; officers and their widows are entitled to pensions.

Dentists.—The general regulations as to the examinations, &c., are the same as for doctors, but the term for study is three years only. The

tuition fees vary from 25 to 100 guineas, according to the hospital; the examination fees from 15 to 26 guineas. The cost of instruments is about £30, and of books about £10. The prospects of income are about the same as for doctors, but there is an increasing demand for qualified dentists. Many surgeons combine this qualification with their own.

Chemists must pass certain examinations, and have practical experience in a pharmacy. The examinations are the usual preliminary in "English" subjects, Latin, &c., and one or two professional examinations; one is sufficient. The apprenticeship fee is from £40 to £90; the term is three years. The professional examination cannot be passed till the age of twenty-one; the fee is 5 guineas. Special class study is usually required, and costs from £15 to £30. Chemists can make an income as unqualified assistants, and receive pay varying from £30 to £70. After passing their examination they earn from £100 to £150 per annum. To start in business requires at least £200; a fair amount of capital would be from £500 to £1000, and an average income about £300 or more.

Dispensers who have passed the chemist's examination are employed in hospitals, &c., at salaries from £2 per week upwards.

Male *nurses* are usually recruited from men who have served in the army medical corps. They are employed in hospitals, or in private cases, and receive from £30 per annum upwards.

Veterinary Surgeons must have studied at one of the veterinary colleges in England or Scotland, and have passed the examinations of the Royal Veterinary College, London, which are similar to those for ordinary medical men. The total fees for tuition and examinations range from 80 to 100 guineas.

Mercantile Marine.—This can be entered either as a ship's boy, age fifteen to seventeen, with about £1 per month, or as an apprentice with a view to becoming an officer. The former becomes able seaman, cook, &c., with pay from £2 to £8 per month according to service and experience, and may become a mate. The latter pays a premium varying from £20 to £50 or even more, and engages to serve from four to seven years. A list of reputable firms who take apprentices can be obtained on application to the Board of Trade, London, S.W. A boy trained on such a ship as the *Conway* at Liverpool has a good chance; the charges vary from £50 to £60 per annum for two years. Before becoming a mate or a captain, nautical examinations, held by the Board of Trade, have to be passed; full particulars can be obtained on application. A mate's pay varies from £4 to £20 a month; a master's, of course, is higher, and on the great liners may be as much as £800 per annum, with allowances. All those on a ship receive food free of cost. Posts as *pilots*, &c., are also obtainable with good emoluments. *Engineers* must have served as such ashore and at sea before obtaining their Board of Trade certificates; the pay varies from £5 per month for a third engineer on a trading ship to £30 for the chief engineer of a liner. *Pursers'* posts are procured by nomination from shipping companies.

Musicians.—A taste for the profession of music generally manifests itself at a very early age. The greatest care should be taken to get suitable instruction. In London the Royal Academy of Music, the Royal College of Music, the Guildhall School of Music, and Trinity College are the best teaching centres. Those who desire to follow music as a profession should also study abroad. If they desire to teach music, they should graduate at some university. A post as organist is a very desirable one as a "stand-by" until a connection is formed and pupils begin to come in. The fixed salary of organists varies from £40 to £100 per annum, or £300 in cathedrals. Private lessons can be given—average fee, 2 to 4 guineas for twelve lessons.

Navy.—Commissioned officers in the Navy may be required to serve either as general officers or in one of the special branches—engineering, gunnery, torpedo, navigation, or marine duty. All enter as naval cadets on the same conditions, and are trained together till they pass for the rank of sub-lieutenant. Appointments to naval cadetships are made by the First Lord of the Admiralty from candidates recommended by a special committee, but such appointments are subject to the candidate passing a qualifying examination. The examinations are held three times a year, the subjects being English, History and Geography, Arithmetic and Algebra, Geometry, French or German, Latin. The limits of age are twelve and eight months to thirteen years. Naval cadets are trained in the Naval Colleges at Osborne and Dartmouth. The fees are £75 per annum during the period of training (or £40 for certain specially-selected cadets). Extra expenses for outfit and personal expenses are also incurred. The instruction is in professional subjects. In four years after joining the cadet attains the rank of midshipman, and his pay becomes £32 per annum, but has to be supplemented by £50 from parents or guardians. His professional studies continue during all this time. He next becomes a sub-lieutenant on passing the examination, and receives £91 per annum; then he rises to lieutenant, with varying rates of pay, amounting in about twelve years to £255. He can also obtain special-service pay, and so add from £20 to £70 to his income. In the meanwhile he will have had to spend at least about £200 for new uniforms, &c. These expenses and the contributions to the mess naturally fall most heavily in the earlier years, so that one who joins the Navy would require to have some private income, at least during the first eight years. A lieutenant can live comfortably on his pay. His next rank is that of commander, with from £400 to £500 per annum, then captain, with £600 per annum and allowances. A rear-admiral receives about £1100 per annum, and a full admiral about £1500, with large allowances for table-money, but of course their expenses for entertainments, &c., are great. Many naval officers obtain, on retirement, civilian employment as marine inspectors, harbour-masters, &c., both at home and in the colonies.

All naval officers now enter as naval cadets, on the footing and in the manner explained above. For the first four years they are trained

together at Osborne or Dartmouth, their course including elementary instruction in marine engineering and the use of tools and machinery connected therewith. They then go to sea as midshipmen, receiving further instruction for three years in such subjects as mechanics and applied sciences, marine engineering, seamanship, &c., annual examinations having to be passed. As acting sub-lieutenants they next receive further instruction at Greenwich and Portsmouth, and when confirmed as sub-lieutenants are posted to the executive marine and engineering branches, in the last receiving a special training at Keyham. Engineer sub-lieutenants start with £137, and rise through various ranks to that of engineer rear-admiral with about £1100 per annum.

Assistant Clerks in the Navy must obtain a nomination from the Admiralty. The limits of age are sixteen to eighteen. The examination is in subjects similar to those for the cadets. Two examinations are held annually. The fee is £1. No private means are required beyond a payment of £20 for the first one or two years. The commencing pay is £45, and the rank of clerk is reached after about one year's service. Their duty at first is to assist to keep the accounts of the paymaster of the ship to which they are assigned. Then paymaster's rank is attained, the pay in which commences at £91 and rises through various grades to about £600, with extra pay for special duties. Two service examinations have to be passed.

Naval Instructors are employed to teach young officers afloat, principally in mathematics. The examination is held principally in that subject; they have first to be nominated. The fee is £1; the age limits twenty to thirty-five. The pay ranges from £219 to £400 and allowances.

Chaplains often hold the above post as well as doing their religious duty. They must be in priest's orders, and are appointed by the War Office; age limit, thirty-five; pay £206 to £400, with extra pay for educational work as above. All these naval officers are eligible for pension.

Royal Indian Marine.—Appointments to officers are made by the India Office from qualified officers of the Mercantile Marine, their position being much as in the Royal Navy. The limits of age are seventeen and twenty-two for a lieutenant, and eighteen to twenty-five for an engineer; the pay of the former rises from £90 to about £700, of the latter from £112 to about £500. Indian pilots are also appointed—pay £110 to £500. Engineers must have worked in that capacity for at least four years, but need not have been to sea. For the other appointments named sea-service is required.

Seamen in the Royal Navy are accepted as boys between the ages of fifteen and one-fourth to sixteen and three-fourths. They must have had an elementary education. After acceptance they are of no further expense to their parents. They rise from £22 per annum to about £300 as warrant officers, with allowances. Full information is given in the pamphlet obtainable *gratis* in any post office.

Religious Employment.—Nearly all the chief religious bodies require the candidate for the ministry to undergo a course of religious instruction in some theological college; and graduation at a university is becoming more and more desirable.

In the *Church of England*, candidates for deacon's orders must have fulfilled one or other of these requirements, and may be examined further by the bishop before ordination. There are a large number of theological colleges, and a handbook giving full information is published by Longmans at 6*d*. The fees vary from £60 to £120, including board and lodging; less of course for non-residents. Application for ordination must be made to the bishop in whose diocese a curate desires to serve. He must be at least twenty-three, and cannot become a priest till the age of twenty-four. Nominations to livings in the Church of England rest with bishops and others, mostly land-owners. A curate may receive from £80 to £200; an incumbent from £200 to £750 per annum. Higher posts in the Church are those of deans, canons, and bishops, the last with incomes from £2000 to £10,000 per annum. A curate in the ordinary course would probably receive a living in about ten years from ordination, unless interest obtained it for him earlier. A number of posts as *chaplains* are open to the clergy. Numerous colonial and Indian appointments are made from the ranks of the home clergy. Indian appointments lie with the India Office. The average pay for such appointments, or for missionaries, bears a close analogy to the emoluments in this country.

Wesleyan ministers are selected from those conspicuous in some church or circuit as lay preachers. They are trained for three years at a college; cost about £50 to £70 per annum. The pay is from £150 to £400 per annum, with allowances for wife and family. The conditions of life in this communion are probably fairer and more comfortable for the average man than in any other. Information as to the colleges, &c., can be obtained from the Wesleyan Centenary Hall, Bishopsgate, London.

Congregational or Independent ministers must study and be examined in a similar manner to that already described, the chief college being Mansfield College, Oxford. Information obtainable from the Congregational Union Memorial Hall, London. Income from £70 to £1000 or more; average, £250 to £400.

Baptist ministers.—Similar conditions of service to above. Information from the Baptist Church House, Southampton Row, London, W.C.

Presbyterians.—Similar conditions prevail. A manse is usually provided free. Information as to England from the Presbyterian Church Offices, 7 East India Avenue, London, E.C. The chief college is Westminster College, Cambridge. This body includes the Established Church of Scotland, and the non-established branch is very numerous in that country and in the north of Ireland. Ministers of the Church of Scotland are trained in the Scottish universities; the United Free Church of Scotland has colleges at Glasgow, Edinburgh, and Aberdeen, but its ministers first take the Arts course in a university. The theological halls of the

Presbyterian Church in Ireland are Magee College, Londonderry, and a college at Belfast.

Miscellaneous.—*Unitarian ministers* and those of other religious communities generally undergo a similar course of training to those already named. The chief college for the training of Unitarian ministers is Manchester College, Oxford, but it is not technically Unitarian. The average minister of this denomination receives at least £120, but a successful man may obtain £1000 or more. *Roman Catholic priests* are usually set apart from childhood. The training is very severe. Minimum age for ordination, twenty-five. The pay varies from £40 per annum upwards, and is usually a bare minimum.

Sanitary Inspectors.—The interest now taken in public health matters and the development of local government is gradually leading to the recognition of this new form of employment open to qualified persons. Examinations in sanitary matters are held by the Royal Sanitary Institute, Margaret Street, London, and by the Scottish Sanitary Association, Glasgow. An inspector deals with nuisances, bad drains, want of ventilation, &c. His pay ranges from £100 to £250 or more per annum.

Secretaries.—The great growth of limited liability companies, and the necessity for trained men to take offices in them, has led in recent years to the formation of an Institute of Secretaries, London, which holds suitable examinations. A secretary should have a knowledge of mercantile law, book-keeping, and other commercial subjects. He is usually appointed on account of his special knowledge, share in the company, or interest with the directors, but there is an increasing tendency to require some sort of training. The pay varies from £200 to many thousands per annum. *Private secretaries* to members of parliament or to people with a large correspondence are usually filled by private nomination, but advertisements are sometimes seen in papers. A knowledge of shorthand and type-writing is required. The pay varies from £100 upwards. Similar remarks apply to the secretaryship of public institutions, small and large.

Singers.—Those who become professional singers usually begin as members of choirs, in which they show ability. Serious voice-training should not commence till the age of seventeen. Great care should be exercised in the choice of a teacher, and several years' study are required. The general training is the same as for musicians (*q.v.*). The usual fee to a good performer is five guineas, but the range is from 5s. upwards. Of course an artiste at the top of the profession can command very large fees, but no one should imagine that such eminence is easily reached, even by a singer with great natural gifts. Hard work, hard study, and constant practice are indispensable. Many singers earn a large income by giving private lessons.

Music-hall Artistes make about £150 to £500 on the average, but successful "stars" earn as much as £1000 to £3000 per annum. Payment is usually made at so much a "turn". Engagements are procured through theatrical agents.

Surveyors in connection with building and engineering operations require the respective trainings described under the heads of "Architect", "Builder", "Engineer", and "Agriculture". A surveyor's speciality is the estimation of quantities required in the construction of some work. Surveyors are usually apprenticed, and pass the examinations of the Surveyors' Institution, London, S.W.

Teachers (in England and Wales).—In order to be recognized as a Certificated Teacher in a public elementary school in England and Wales a candidate must either (i.) have been trained in a training college recognized by the Board of Education and have passed the Board's final examination of students in training colleges or an alternative final examination duly sanctioned by the Board; or (ii.) have passed the Certificate Examination of the Board for Teachers in Elementary Schools; or (iii.) have been recognized as a certificated teacher by the Scotch Education Department; or (iv.) be certificated in the first class by the Irish Commissioners of National Education; or be reported by them to have passed the revised examination and to have received a diploma from them; provided in either case that he or she has been trained in a training college; or (v.) have passed a final examination for a degree, held by a university in the British Empire and recognized by the Board for this purpose, or be an Associate of the Royal College of Science, provided in each case that he or she holds a recognized certificate of proficiency in the Theory and Practice of Teaching; or (vi.) have qualifications which, in the opinion of the Board, are substantially equivalent to those represented by the Board's certificate.

Those intending to enter the teaching profession as elementary school teachers will usually begin either as pupil-teachers or as bursars. Candidates for recognition as pupil-teachers must be approved by an inspector of the Board of Education and must be suitable in respect of character, health, and freedom from personal defects. They must normally be over sixteen, but not over eighteen, years of age, and the normal period of recognition is two years. A pupil-teacher receives a training in the art of teaching in a public elementary school in connection with the ordinary work of the school, while at the same time undergoing instruction in a pupil-teacher centre, which may be part of a secondary school or a separate institution. The curriculum of a centre must make provision for instruction in English Language, Literature, and Composition, History, Geography, Mathematics (including Arithmetic), Science (including practical work), Reading and Recitation (including voice production), Music, Drawing, Physical Exercises, and at least one language other than English; besides Needlework for girls and Manual Work for boys. The pupil-teacher at the end of his course must enter for the Preliminary Examination for the Elementary School Teachers' Certificate or some other examination qualifying for admission to a training college.

A pupil in a secondary school, between sixteen and eighteen years of age, intending to become an elementary school teacher may, if recommended

by the head-master or mistress, be recognized as a bursar for one year by the Board of Education, provided he has been under instruction in the school for three years preceding his recognition, and provided also that the Local Education Authority satisfies the Board that the pupil will receive education free of fees during the period of the bursarship at the secondary school attended by him. Such a bursar by the end of his year of recognition should have qualified for admission to a training college in the same way as a pupil-teacher.

Normally, the course of study and training in a training college extends over two years, and candidates for admission must be over eighteen years of age. The Board of Education holds a Final Examination for Students in Training Colleges, the subjects being English, History and Geography, Elementary Mathematics, Hygiene, the Principles of Teaching, and the Theory of Music; but certain alternative examinations of an equivalent kind may be recognized. A student who has satisfactorily completed his training will be recognized by the Board as a Certificated Teacher.

For the teaching of special subjects, such as Cookery, Laundry Work, Housewifery, Handicraft, &c., a diploma recognized by the Board of Education is necessary. For secondary school teaching a university degree together with a training in the art of teaching is requisite.

The scale of salaries in the schools under the control of the London County Council may be broadly indicated. In elementary schools the salary for trained assistants rises from £100 to £200 in the case of masters, and from £90 to £150 in the case of mistresses. Head-teachers in the largest schools are paid £300 to £400 if men, £225 to £300 if women. Head-masters of secondary schools may obtain as much as £800, and head-mistresses £600.

For fuller information see *The Red Code*, published annually by the National Union of Teachers, (1s. net).

Teachers (in Scotland).—A candidate for the post of teacher in a public elementary school in Scotland begins as a junior student. Junior students are nominated by the School Board or Committee on Secondary Education of their district, on the basis of a report submitted by their principal teacher after they have given him six months' notice of their intention to present themselves for nomination. They must have received instruction according to the curriculum of an Intermediate (or Higher Grade) School, and have qualified for the Intermediate Certificate, and they must produce a satisfactory medical certificate of health and physical fitness. Junior students receive instruction at such schools as are approved by the Scotch Education Department for the purpose. The curriculum includes English, at least one other language, History, Geography, Mathematics (including Arithmetic), Experimental Science, Drawing, Manual Work (for boys), Needlework (for Girls), Physical Exercises, and Music. The course covers three years normally, and there must be provision for systematic training in the art of teaching each of the primary school subjects. Fees may be charged to junior students, and maintenance

allowances may be given. At the end of his course the junior student will receive a certificate.

Holders of the Junior Student's Certificate, university graduates, and some others may be admitted into a training college as students in full training or senior students. The normal course in such a college extends over two years, and must include satisfactory provision for professional training. The curriculum for professional training must include the elements of School and Personal Hygiene, Psychology, Ethics, Logic, and also the principles of education and the history of educational systems and theories. For the teaching of higher subjects in an intermediate or secondary school a university degree with honours in the special subject is in general required, but a course of professional training is necessary for all who have not qualified for the ordinary certificate. The Department requires the teacher of a special subject, such as art, horticulture, domestic economy, &c., to hold a recognized diploma.

The salaries of Scottish teachers vary according to district. Those of the Glasgow School Board are as follows: Trained Assistant Masters, £85 rising to £150, if graduates £90 rising to £150; Trained Assistant Mistresses, £65 rising to £120, if graduates £70 to £120; Second Masters, £150 to £250. For Headmasters the salary under the leading boards ranges from £250 to £400 or more. Secondary teachers, of course, receive higher salaries corresponding to their more advanced training and more skilled work.

For fuller information see *Nelson's Annotated Scotch Code*, published annually (Thomas Nelson & Sons, 2s. 6d. net).

Teachers (in Ireland).—To become a certificated teacher in a National or Model School under the Commissioners of National Education in Ireland a boy or girl must begin as a monitor or pupil-teacher. Monitors, who must be not less than fifteen, and not more than seventeen, years of age on appointment, are appointed by the Commissioners on the recommendation of inspectors. They are employed in teaching for a few hours each day, and during the rest of the day are under instruction with the other pupils of their school or are allowed to study by themselves under supervision. A simple preliminary examination must be passed prior to appointment, unless the junior or middle grade certificate of the Board of Intermediate Education has been obtained. They serve for three years and are examined annually, the King's Scholarship examination being the final. Monitors who pass the King's Scholarship examination are eligible for appointment as assistant teachers within three years of completing their service as monitors. Pupil-teachers must be not less than fifteen, or more than eighteen, years of age at appointment. They are selected mainly from students who have passed with honours in the junior, middle, or senior grade under the Board of Intermediate Education, and are appointed for two or three years, the longer period being for those who pass only in the junior grade. At the end of each year of service a qualifying examination is passed, and at the end of the whole term

the King's Scholarship examination must be taken to qualify for appointment as assistant teachers. Both monitors and teachers are paid small salaries, those of pupil-teachers being the higher. To qualify as a trained teacher a monitor or pupil-teacher who has passed the King's Scholarship examination must enter a training college for two years. Graduates of a university are admitted to a one-year course of training, without previous service as monitor or pupil-teacher. There is a yearly examination of King's Scholars in training colleges, the final examination conferring the right to the trained teacher's diploma after two years' satisfactory service. The salaries for teachers of the highest grade are as follows: For men, £139 by triennial increments of £12 to £175; for women, £114 by triennial increments of £9 to £141. A teacher, however, always begins in the third grade, with £56 for men and £44 for women.

For fuller particulars see the *Rules and Regulations of the Commissioners of National Education in Ireland*.

Traders.—It is impossible in the space available to go into much detail on this point. To enter into trade requires a certain amount of capital and special knowledge of the details of the trade in question. Wholesale trade is more than ever carried on by several men in partnership, some with capital, some with brains and necessary knowledge; or by limited liability companies, officered by experts, and presided over by directors with some general knowledge of business. (See under "Accountants", "Secretaries", &c.) Retail traders continue, however, to manage their own businesses, but even they are coming under the company promoter. People enter into retail trade after learning it as an apprentice or shop assistant, or by buying a business and carrying it on with or without an experienced manager. The amount of capital required varies from a few hundred pounds upwards. The situation of the shop counts for much. A business can be learnt best in a country town, or in a small shop in a large town; then a more important establishment should be entered and experience thus gained. The premium for learning a business ranges from £20 to £50. Small wages are paid, at least in the fourth or fifth year of service. The best age to enter is sixteen or seventeen.

Assistants in shops live indoors or out: in the former case the wages vary from £12 to £20 per annum up to £70; in the latter, from £50 to £150. The pay of managers and buyers varies from £100 to £500 or more per annum.

The net profits in ordinary miscellaneous and general shops, that require no great capital, may vary from £2 to £3 per week; in large shops in some special line very large incomes are earned.

Writers, &c.—The number of people engaged in literary work of one kind or another is very great. As no special training is required, the opening seems easy, but steady practice is necessary, and it is difficult to make a living because there are so many competitors from the ranks of those who earn money in other ways. The best-paid, and those in most regular employment, are *journalists*. A knowledge of shorthand and

type-writing is most desirable. Many university men work in newspaper offices. A start is usually made as reporter or general utility man in a newspaper office. The chief requirement is ability to write a neat paragraph or account of some event. The pay of a junior at such work ranges from £50 to £130, according to the class of paper. Suitable men obtain posts as sub-editors at pay from £150 to £600. The salaries of editors range from £500 to £2000.

Journalists who are attached to no special paper, but send "copy" to any, are paid at from 2*d.* to 3*d.* per line; pay for "column" articles varies from one to three guineas; pay per page at from 15*s.* upwards. Payment is usually made monthly, or on the publication of accepted articles. There are many openings as interviewers and specialists or technical writers in trade papers. Contributions should be clearly written, on one side of the paper only. The pages should be numbered in the right-hand corner and fastened on the left. The name and address should appear at the top right corner of the first page. A note should be written to the editor offering the article for publication on his usual terms, and calling attention to any special feature. Type-written articles always receive better consideration than MS. Stamps should be sent for the return of an article if unaccepted.

Authors.—Much information as to the ways and methods of literary men will be found in their biographies, &c. The general remarks just made apply also to writing books. There is an increasing and ever-unsatisfied demand for short stories and bright descriptive articles—length about two thousand words. The copyright of books written should be retained if possible. An agreement should be made with a publisher to publish on a royalty to be increased after the sale of a certain number of copies.

Translators can obtain employment for English versions of specially interesting matter, especially from technical or trade papers.

Amongst other employments connected with literary work may be named *Librarians*, who generally enter libraries as clerks, and whose pay varies from £120 to £500 per annum. Employment can often be obtained at *indexing* work for papers, &c., or at *press-cutting agencies*. *Publishers* of books require capital and the ordinary business training, as also do *booksellers* and *stationers*. The Institute of Journalists and the Society of Authors in London give much information as to their respective work.

II. OCCUPATIONS FOR WOMEN.

The census of 1901 shows that there are nearly a million more women than men in the United Kingdom, a very large proportion of whom are dependent on their own exertions for maintenance.

It is now generally acknowledged that if women are to do good work they must receive definite technical training for what they undertake to do.

Though it is often difficult to discover in what branch of industry a girl is most likely to be successful, in every case a sound English education is the foundation on which the special training should be based. By the time a girl is sixteen or seventeen years of age her parents or teachers will be able to judge, to some extent at least, in what direction her talents lie; some have powers of mind, some manual dexterity and skill, and in selecting the course of training which should be followed it is most important that the natural gifts of each should be well considered.

Accountants.—Although women are not yet admitted as members of the Institute of Chartered Accountants, there are some who are practising very successfully as accountants and auditors, undertaking the same work as chartered accountants. A lad who wishes to become a chartered accountant must serve for five years as an articled clerk in an accountant's office, and a young woman must be prepared to devote the same length of time to learning thoroughly the work she proposes to do. The subjects of the examination which all members of the institute have to pass show the sort of knowledge required, viz. book-keeping of all kinds, including partnership and executorship accounts; auditing; the rights and duties of liquidators, trustees, and receivers; the principles of the laws of bankruptcy, of joint-stock companies, and of mercantile law in general. The work is suited to a clear-headed girl whose knowledge of arithmetic is good and accurate. She should begin her special training as soon as she leaves school, but even after her five years of study should not start on her own account until she has gained some experience by serving as an assistant.

An accountant's fees are high, but they vary considerably according to the nature of the work to be done.

Artists and Art Teachers.—In the various departments comprised under the general term Art there is much the same field for women as for men, whether as teachers or as workers; and there are now a great many institutions in which an excellent art education can be obtained. We borrow the following sentences, along with other information, from *The Girls' School Year Book*: "The girl who, on leaving school, wishes to take up Art as a profession, will find perhaps the surest demand for her talents if she becomes an Art Teacher. There are also openings for Illustrators, Miniature Painters, and Designers, while for those who are exceptionally gifted the career of the Artist, with a studio of her own, offers many attractions.

"There is an increasing demand for properly qualified teachers of Art in all schools, both public and private, but in the majority of cases it is necessary that certain Certificates should have been gained by the applicant. The generally recognized Certificates are: *The Art Class Teacher's Cer-*

tificate and *The Art Master's Certificate of the Board of Education (Royal College of Art, South Kensington)*, and *The Teacher-Artist Certificate of the Royal Drawing Society*. The Certificates of the Board of Education may be worked for in any good School of Art throughout the country, but should the intending teacher wish to proceed to the full Associateship of the Royal College of Art she should gain admission to the Royal College at South Kensington." It is also recommended that she should gain, if possible, some training in teaching by becoming a pupil teacher in a School of Art, and also be able to teach some other subjects than Art.

The Royal College of Art, South Kensington, is specially intended for the training of art teachers, and for giving instruction in drawing, painting, modelling, and designing, teachers and students being selected by competition in the Arts examinations of the Board of Education, though other students may be admitted on payment of fees. As elsewhere mentioned, a number of valuable studentships, exhibitions, and scholarships are obtainable by competition, and serve as a highly important aid to the obtaining of an Art training. There are four "schools" in the College, namely: Architecture; Ornament and Design; Decorative Painting; and Sculpture and Modelling. The Full Associateship is awarded to students who have qualified in the four schools of the Upper Division, the School Associateship to those who have qualified in a school selected by them in the same division. The charge for ordinary fee-paying students is £12, 10s. per term, the number of these being limited.

Free teaching may be obtained at the schools of the Royal Academy by successful applicants who submit certain specified works that are approved of. The ordinary term of teaching for those admitted as students is three years. There are four scholarships, each of the value of £40 a year.

The Royal Drawing Society, incorporated in 1902, was instituted for the encouragement of drawing, painting, and modelling, &c. Its Teacher-Artist Certificate may be obtained by candidates who pass satisfactory tests in actual drawing, theory of teaching, and teaching a class. The society has organized exhibitions of teacher-artists' drawings, drawings by boys and girls, and examinations of schools.

At the Royal Female School of Art, Queen Square, Bloomsbury, students are prepared for admission to the Royal Academy Schools, and for the Entrance Examinations of the Royal College of Art. Free studentships and some valuable scholarships are obtainable.

In the Clapham High School, Clapham Common, a full course of professional training is given for intending Art Teachers, students being prepared for the Art Class Teacher's or Art Master's Certificate of the Board of Education, the Teacher-Artist Certificate of the Royal Drawing Society, &c.

There are many other Metropolitan Schools of Art, partly in connection with the Board of Education, besides various excellent schools throughout the country, as at Liverpool, Birmingham, and Glasgow.

Book-keepers.—A large number of women are employed as book-keepers in houses of business, and are able to earn fair wages. A book-keeper must be neat, accurate, and methodical. She must write a clear hand, taking special care to make her figures distinctly. She must understand the principles of book-keeping by double and single entry, and have some knowledge of the tabular system now so much used. She should also be able to write a good business letter. The Society for Promoting the Employment of Women, 22 Berners Street, London, started the first adult class many years ago. Now book-keeping is taught at all the polytechnics and evening colleges and at many schools. It is desirable that the instruction should be given by a practical book-keeper who has had experience in business. Shorthand and type-writing are valuable additions to a knowledge of book-keeping, but are not always necessary. A knowledge of French or German too will be found very useful. The salary of a competent book-keeper varies from £1 to £2, 10s. weekly.

Vacancies are generally advertised in the *Daily Telegraph*, *Daily Chronicle*, and other papers. A register is often kept at the place where the instruction is given.

Children's Nurses.—There is a good demand for gentlewomen as nurses for children, and if a mother is for any reason unable to devote considerable time and attention to her children herself, her best substitute will be a properly trained lady nurse.

At the Norland Institute for Training Children's Nurses, 10 Pembridge Square, W., an excellent training is to be obtained. Gentlewomen over eighteen years of age are taken as pupils for nine months. The first three are spent in the institute, where they learn to cut out and make children's clothes, also a little plain dressmaking, the food and clothing best suited for children, and simple kindergarten occupations. During the next three months they attend a children's hospital, and during the last three months they have practical work with children by going as probationer nurses into a family. The fees for the six months' training in the institute, including the hospital fees, board, lodging, and apparatus, are thirty-six guineas, payable half on entrance and half after three months. The minimum salary of a trained nurse is £20 a year, rising £2 annually for three years, after which time the nurse is independent of the institute, and can usually get a much higher salary.

Gentlewomen can also be trained at Sesame House, Acacia Road, St. John's Wood, and at the Children's Hospital and Day Nursery at Plaistow. In the latter a very useful training can be obtained for a fee of £30 for one year.

Clerkships.—Clerkships of various kinds are open to women, and the sedentary nature of the work is very suitable to them. Of late years a limited number have been employed in the Bank of England, but in every case these appointments have been obtained through private interest. All candidates must be nominated; those who have passed the

Oxford or Cambridge Locals are not required to go up for any further examination, but those who hold no certificates have to pass a test examination. The arrangements for the lady clerks are very comfortable. Their salary begins at £54 a year, and rises to £100.

At those branches of the National Penny Bank which are open during the daytime several young women are employed, and they earn salaries which vary according to their efficiency and accuracy. Candidates for appointments in this bank must be fairly well educated, and write neatly and carefully, making their figures very distinctly.

The daughters of professional men are employed in the Prudential Insurance Office. Applications for appointments are very numerous, and the vacancies few. The age at which candidates can enter is from eighteen to twenty-five. The salary begins at £32 yearly and rises to £60; those who become superintendents receive more.

In offices and houses of business there is also a moderate demand for young women who can write a good hand, and do ordinary office work, such as arranging papers, docketing letters, &c. Such clerks receive from 15s. to 20s. weekly.

There is a greater demand for women who can write shorthand at a fair speed, and type that which has been dictated, expressing it in good English and punctuating it correctly. A knowledge of French, German, or Spanish is most useful to such clerks, and one who can correspond in one or two foreign languages receives from £2 to £3 weekly, and sometimes more.

Vacancies for clerks are usually advertised, and those seeking appointments should not fail to look for them in the daily papers. Situations may also be heard of from employment agencies.

Civil Service Clerkships, &c.—A large number of women are engaged as clerks in the different departments of the Post Office. Candidates for appointments must be between eighteen and twenty years of age, unmarried, and duly qualified in health and character. The competition for these appointments is very keen; there are frequently eight to ten candidates for every vacancy. The examination is open to all. The subjects are—handwriting, arithmetic (advanced), English composition (with special reference to grammatical accuracy), geography, English history, mathematics, shorthand, and Latin, French, or German (several subjects being optional). Every candidate attending an examination has to pay a fee of 7s. 6d. The work is purely clerical, and the female clerks do not come in contact with the public; hours, seven per day.

The salary of a woman clerk begins at £55 a year, rising by £2, 10s. annually to £70, then by £5 to £100. There are higher classes, promotion to which depends on merit.

There are also girl clerks. Candidates must be between sixteen and eighteen years of age. The subjects in which they are examined are the same as those for the women clerks, and the fee is the same. For the first two years the salary is £35 and £37, 10s.; work six hours a day. After two years a girl clerk can be promoted to be a woman clerk as soon as

a vacancy occurs, provided she has received a certificate of competency. It not, she may be appointed a sorter.

Girls between fifteen and eighteen can become candidates for appointments as sorters. Their duties consist chiefly in sorting and arranging official papers. The subjects in which they are examined are reading and copying manuscripts, handwriting, arithmetic, and the geography of the United Kingdom. The salary begins at 14s. weekly, rising gradually to 30s.

Competitions for *female learners* are held both in London and certain provincial towns. They must be between fifteen and eighteen years of age. They are examined in handwriting, orthography, English composition, arithmetic, and general geography. Those who are successful in the examination have to receive instruction in telegraphy, and also instruction and practice in counter duties, the period of instruction usually extending over a year. Pay begins at 7s. a week; on reaching the age of nineteen, if fully efficient, the learner receives 18s., which rises to 28s., and in the case of those who earn first-class certificates for good conduct and efficiency in the discharge of their duties to 38s.

In every department the examinations are competitive. A clerk must resign her post when she marries. All candidates must be five feet in height and in sound health.

Dispensing.—The number of women employed as dispensers, though still small, is on the increase. The work is very suitable for properly-qualified women who are careful and accurate. They must gain certificates either from the Society of Apothecaries or from the Pharmaceutical Society. They can get appointments in hospitals, especially in those for women and children, in dispensaries, private surgeries, and elsewhere. The salary ranges from about £80 or £90 a year upwards.

Women can be trained at the Westminster College of Pharmacy, Trinity Square, Borough, London, S.E., for the preliminary, the minor, and the major examinations of the Pharmaceutical Society, as well as for those of the Apothecaries' Society. The fees for three months' instruction in subjects required for the preliminary examination are £3, 3s.; for the minor, viz. practical pharmacy and dispensing, £8, 8s.; and for the major, £5, 5s.; but frequently a longer preparation is necessary, and for this an extra charge is made. The laboratories at the college are open daily from 1 till 4 p.m.

Women can also attend the lectures and examinations at the Pharmaceutical Society, 17 Bloomsbury Square, London. The fee for the preliminary examination is £2, 2s., but if the candidate has passed other recognized examinations her certificates are received in lieu of this, provided Latin, arithmetic (involving a good knowledge of the British and the metrical systems of weights and measures), and English grammar and composition have been taken.

The cost of the lectures for the minor examinations is £30 inclusive, and for the major £18 inclusive. Candidates for these examinations must

be at least twenty-one years of age, and must have been employed for three years as apprentices or students, or in translating and dispensing prescriptions. This practical work can be learnt at some dispensaries, hospitals, infirmaries, or in private surgeries, but few chemists are willing to take young women as apprentices.

Women can also train as analytical chemists and become Associates of the Institute of Chemistry. They must be at least twenty-one years of age, and have passed an examination, approved by the Council, in theoretical and practical chemistry, physics, and elementary mathematics.

Excellent instruction in this branch of chemistry is given to women at a moderate cost at the University, Manchester, where a good laboratory is set apart for their use.

Handicrafts.—Among handicrafts or manual occupations by which women may make or add to their livelihood are such as embroidery, lace-making, art needlework, wood-carving, millinery and dressmaking, &c. They may also give instruction in one or other of those industries, some of which are taught in the Royal Female School of Art, the Central School of Arts and Crafts (L.C.C.), and the Royal School of Art Needlework.

Inspectorships.—Educated women have for some time held appointments as Inspectors of Factories and Workshops. It is most desirable that their number should be increased, because so many women and girls work in factories. All such appointments are made by the Home Secretary, to whom testimonials of character and qualifications must be sent. Candidates for these posts have also to pass an examination, which may be competitive. The subjects in which they are examined are handwriting, spelling, English composition, arithmetic, sanitary science, and an elementary knowledge of the provisions of the Factory and Workshop Acts. They must be between twenty-one and forty years of age. Examinations are held only when there are vacancies to be filled. The salary of an ordinary lady factory inspector is from £200 to £300 a year, with traveling expenses.

Under the Local Government Board there is an Inspector of Children boarded out, whose salary is £400 a year.

In the Education Department there are fifteen women inspectors for needlework, cookery, &c., and other subjects, at salaries varying from £200 up to £500.

Some women also hold appointments as Sanitary Inspectors in different parts of the kingdom. They are appointed by the local authorities. They must hold a certificate from the Sanitary Inspectors' Examination Board or from the Sanitary Institute of Great Britain. Lectures on sanitation and hygiene are given at the National Health Society, and lectures on the duties and powers of sanitary inspectors are given at the Sanitary Institute in Margaret Street, Regent Street, London.

The salary of a sanitary inspector varies from £70 to £110, or more in some cases.

Journalism.—This is a field for women which is gradually becoming

wider and wider. Many papers have sections specially devoted to subjects of interest to women, and there are also papers entirely devoted to such subjects, the writers, or most of them, being naturally women, while the monthly magazines also receive many contributions from women. Women generally start by getting small and unimportant contributions accepted, and gradually work their way upwards. There is a School of Journalism and Secretarial Training for Women at 8 and 9 Johnson's Court, Fleet Street, E.C. Journalism as a profession is rather precarious.

Librarians.—There is no official return of the number of women who are employed in the public libraries in different parts of the kingdom, but an increasing number now hold appointments in these institutions. The regulations under which they hold their appointments differ considerably. They usually begin as junior assistants at very small salaries.

Any woman who desires an appointment as librarian will find her chances of success vastly improved if she attends the classes at the London School of Economics or those arranged by the Library Association, and if she passes the examinations held by that Association. The honorary secretary to the Library Association, Whitcomb House, Whitcomb Street, Pall Mall East, London, will furnish full information concerning them.

The examination is divided into three sections: (1) Bibliography and literary history; (2) cataloguing, classification, and shelf arrangement; and (3) library management. The sections may be taken separately, and a certificate is granted for each.

Candidates must have passed some recognized public examination, or must produce satisfactory evidence of a good education, or have been engaged in practical library work for three years previous to the examination.

Matrons in Institutions.—The head matron in an institution is responsible for all the domestic arrangements of the house. She should have received the training in domestic economy which is provided at the polytechnic and technical schools in London and in different parts of the country. She must see that all her assistants are efficient in their respective departments. A head matron has generally been first an assistant matron.

The salary of a head matron varies, but is usually about £40 to £60; that of an assistant matron about £18 to £25. Vacancies are frequently advertised, and are also to be heard of through employment agencies and societies.

Matrons in Schools.—The matron in a school for the sons of gentlemen should be a lady, motherly and kind, accustomed to boys, and able to win their confidence and respect. She has to attend to the health of the boys, nursing them in slight ailments and accidents. She ought to have had experience in nursing and to understand "first aid to the injured". She has to keep the boys' clothes in order, and to see that the bedrooms are clean and well-aired. The salary is generally from £30 to £50 a year, but it may be more.

In a girls' school the matron's duties are similar.

Vacancies seldom occur in the middle of the term. They are usually advertised.

Medicine.—Many women are now engaged in the medical profession. The General Medical Council regulates the conditions of admission into its ranks. There are a number of universities and several other bodies whose degrees or diplomas admit into this profession, and the student, before beginning her course of study, should decide which degree or diploma she wishes to obtain, as the rules and conditions of each differ to some extent.

In every case a preliminary examination must be passed, and must include the following subjects: English grammar and composition, Latin grammar and translation, the elements of mathematics, arithmetic, algebra to simple equations, geometry, including the first three books of Euclid, and one modern language.

If the student has passed any of the examinations recognized by the General Medical Council (a list of which can be obtained at the office, 299 Oxford Street, London) this preliminary examination is not required, provided the subjects mentioned above have been taken. If the student wishes to take the degree of the London University, she must matriculate in the ordinary way.

A course of five years' study is required by the Medical Council, but failure to pass the various examinations as they come will throw a student back for three or six months. The fees vary to some extent at the different institutions, but for a regular course average about £150, the total being less if paid in one sum than if paid by instalments. In addition to this the fees for the examinations for a diploma have to be paid; for example:—

Diplomas in Medicine, Surgery, and Midwifery, Society of Apothecaries, London, £15, 15s.;

Diplomas of Colleges of Physicians and Surgeons, Edinburgh, and Faculty of Physicians and Surgeons, Glasgow, £30;

Diploma of College of Physicians and Surgeons, Ireland, in Medicine, Surgery, and Midwifery, £42;

M.B., University of London, £15;

M.B. and Ch.B., Scottish Universities, £23, 2s.

There are a few scholarships at the London School of Medicine for Women (8 Hunter Street, Brunswick Square, W.C.), some especially for the benefit of those who propose to take up Zenana work, or to act as medical missionaries among heathen or Mahomedan races. There is great need for women as doctors in India. Several lady doctors hold important official positions in the United Kingdom or abroad.

Music.—There is a wide field for teachers of music as well as for professional performers—singers or instrumentalists—but of course performers are comparatively few in number, and must be possessed of very special qualifications. We have already mentioned the chief institutions at which an education in music may be obtained, and for a music mistress it is practically essential that she should possess a recognized diploma or certificate. Salaries of resident mistresses range from £30 to £60 or more.

Needlework.—As fancy-work and embroidery have been spoken of elsewhere (see Vol. IV.), plain needlework alone remains to be considered here. It is not a remunerative occupation. The best hand-work commands a fair price; but it takes a long time to make a garment neatly, and the work is trying to the sight. There is, however, a fair demand for teachers of plain work, dress-cutting, and millinery for the technical classes established in many parts of the country. Candidates for such appointments should hold certificates or diplomas from the Institute for the Advancement of Plain Needlework, or some other recognized examining body.

The subjects in a teachers' examination include drawing diagrams, cutting out a garment to measure, showing samples of all the stitches required for making it, marking, darning, patching, &c. The candidate is also required to write a clear description of the work. The fee for the examination is 5s.

Dress cutting and making are also taught in the technical classes. The teacher must understand one of the many systems recognized by the Education Department and the County Councils. In every case she must draw diagrams and explain them.

These technical classes are very useful, but they do not give sufficient training for business. They supplement but do not take the place of apprenticeship.

Dressmaking and millinery are far more remunerative than plain work. A good dressmaker who cuts and fits well can always earn a good salary. The "hands" who can make part of a dress only are frequently out of work for weeks together in the dull season, and seldom earn more than 15s. to 20s. a week when in full work.

Upholstery is another branch of plain work which is fairly remunerative. Some few women can cut out for and fit furniture of all kinds well, but the greater number who work in shops only make up what has been cut out for them. Technical classes for upholstery have been started at some polytechnics.

Nursing the Sick.—Those who desire to undertake nursing the sick ought to be strong and healthy, with no organic weakness. The work is trying, and if any weakness exists hospital work is very apt to develop it. The age at which probationers should begin their training is between twenty-four and thirty-five, though in children's hospitals they are frequently taken younger. Nurses can be trained in a great many hospitals in London and in the country. The terms vary; in some cases probationers are required to pay 20s. or 21s. weekly, and are trained for one year only, but in most cases the nurse serves the hospital for three or four years, paying no fee, but receiving a salary from the first, generally about £10 or £12 a year, rising to £20 or £25.

At the end of her training a nurse sometimes remains on the nursing staff at the hospital, sometimes she becomes a member of a nursing institution. She can seldom start by herself, unless she is well known to doctors

who will recommend her, and even then, though she earns more at each case than she would if she went from an institution, her expenses are greater, for she has to keep a home, and she has frequent intervals between her engagements during which she earns nothing.

A district or village nurse tends the sick poor in their own homes, going from house to house and helping in and directing the care of the invalids. She shows those who are in charge of the sick person how to make and apply poultices, &c., and how to carry out the doctor's orders. She also attends as far as possible to the sanitary condition of the sick-room. She ought to be active and strong, as well as fully trained, and should understand monthly as well as ordinary nursing. A nurse who possesses tact, and is genial and kind in her manner, soon gains the confidence and affection of the poor.

Queen Victoria's Jubilee Institute for Nurses is a society for nursing the sick poor in their homes, the central office being in London. Candidates for admission must have had three years' hospital training. Salaries are from £30 to £35, besides board, uniform, &c. Higher posts are paid in proportion.

Photography.—Many women are employed in the mechanical parts of photography, such as printing, mounting, and spotting, but the salaries they earn are small, seldom exceeding £1 weekly, and are often less. A lady who is successful in re-touching portraits can earn £2 or more weekly, but she must be well trained and have very good sight.

Comparatively few women have made a high position for themselves as operators. Photographers can seldom be found who will teach women to take portraits. They will teach the mechanical, but not the higher parts of the work. At the School of Photography connected with the Polytechnic in Regent Street, London, the whole process can be learnt, including the arrangement of light and shade, the management of the camera, the posing of the sitter, the development, printing, and the details of platinotype and other printing. Some of the most successful lady photographers have received their instruction there. The fee for one year is £50. Those only should attempt this work who possess artistic taste and have had a good art training.

Physical Training.—Women who desire to be trained as teachers of physical exercises must be healthy, of good physique generally, with strong vocal organs. They must have a bright manner, tact, and strength of character sufficient to enable them to maintain good discipline in the class. A knowledge of anatomy and physiology sufficient to show them how all the muscles are brought into use is also requisite. Slightly deformed or delicate children are frequently much helped and strengthened by means of exercises specially adapted to each case.

The student should begin to learn when about eighteen years of age. There are several physical training colleges or institutes in London, and others at Bedford, Southport, Liverpool, and Manchester. Madame Oesterberg's college for physical training on the Swedish system, at Dartford, is

one of the best places for learning. It was the first institution of the kind in England (1885). The course of training lasts two years, the terms for board, lodging, and instruction being £108 a year. There are several other places at which good training can be obtained. In every instance the necessary gymnastic dress and shoes have to be purchased.

Physical training—including drill and certain games—is now considered so important that there is an increasing demand for properly-trained teachers. Some of the large schools, especially those in the country, have a resident teacher, who may perhaps undertake some other duties, such as superintending the girls out of school. The salary in that case is from £40 to £50, with board and lodging. A young teacher thus gains experience, and after a few years, if she possesses a small capital—about £200—she can start classes of her own and become a visiting teacher. She must be careful to select a neighbourhood not already occupied by a good teacher, and one in which she has some connection. She should then advertise in the local papers, and send circulars to the best houses in the locality, stating terms, and giving testimonials from the parents of pupils she has taught, or referring to them. A few influential names will have great weight.

Plan-Tracing.—Tracing the plans of engineers and architects affords congenial occupation to some gentlewomen who are neat and accurate, can write a small round hand, and make very clear figures. Skill in this work can be acquired by an apt pupil in four or five months, the usual training fee being £5. A tracer can earn from 4*d.* to 7*d.* an hour, or from 15*s.* to 25*s.* a week; some earn more.

The demand for tracers is limited, but is on the increase. A few large firms in London and in the north have women on their staff, and there are plan-tracing offices in London entirely in the hands of women.

Teaching.—See under "Occupations for Men".

Teaching (Private).—Teaching must now be regarded as a profession for which regular training is necessary. As a private governess in a family, a lady will scarcely get a good situation unless she has passed some university examination, and unless she possesses many accomplishments—fluent French and German, good music, drawing, and painting, in addition to a good knowledge of English. A residence abroad for a year or two is a great help to the private governess. A knowledge of cycling is now frequently added to a long list of qualifications.

There is no standard for the salaries of private governesses, and often when much is demanded of them the salary offered is wholly inadequate, perhaps not more than £35 or £40 a year. Still, there are conscientious employers who take into consideration the cost of the education the governess has received, and pay a liberal salary, which enables her to make some provision for old age or sickness.

A governess who is pleasant in the house, and who educates as well as teaches her pupils, is constantly recommended from one family to another, and seldom has to seek help from any registry office.

A gentlewoman often becomes a governess simply because she is left without means and does not know how otherwise to maintain herself. Possibly in girlhood she has had a fair education, but not thinking that she would have to earn her living, she may have allowed her acquirements to lapse; having had no definite training, she can seldom rise beyond the position of a nursery governess, who has to take the entire charge of the children as well as to teach them. The salary in that case seldom exceeds £30 a year, and frequently it is not more than £20, sometimes even less. The little brown-book issued twice a year by the Governesses' Benevolent Institution, 32 Sackville Street, contains a terribly long list of candidates for the small pension granted by that institution. It shows that in the majority of cases the ladies named took up teaching because they lost their parents or homes and had to do something, and were glad to accept salaries out of which it was impossible for them to make any provision for themselves.

Typewriting.—The overstocking of the market in this section of remunerative occupation is only among the incompletely equipped. "There is always room on top", and there is an urgent and increasing demand for first-class stenographers, who can earn from 30s. to £2 a week and up to a guinea additional with a knowledge of Commercial French and German. The fee for one year's tuition in Commercial Typewriting only is from five to twelve guineas, according to the receptivity of the pupil. The Association of Shorthand Writers and Typists does good work in maintaining the general level of proficiency and securing a fair remuneration. Address, 19 Buckingham Street, Strand, London.

HEALTH.

Necessity of Regular Exercise.—"The body is a machine with the peculiar attribute that the more it is used within reasonable limits, the stronger and more capable it becomes" (Treves). By exercise the muscles grow and are strengthened; without it they waste, fat taking the place of healthy tissue.

During exercise the heart-beats become more rapid and stronger, breathing is fuller and quicker, digestion is stimulated, and perspiration is increased. This all means that the muscles concerned in all vital processes—the involuntary muscles—gain strength and tone, but it means further that an increased supply of good oxygenized blood is being carried to all parts, including the brain and nervous system; that the processes of building up and breaking down, on which life itself depends, are being carried on more rapidly and thoroughly; and that waste matters, which would otherwise accumulate and act as poisons, are being carried away.

"Exercise means growth, functional vigour, and the maintenance of a high standard of organic life. Undue rest implies decay, feebleness, and a debased standard of functional value. Absolute rest is found only in death" (Treves).

The sense of restlessness which during enforced stillness comes to all healthy young people, especially to children, for whom movement is most necessary, is one of nature's safety-valves. It is the demand of the muscular system for work, just as a sense of fatigue is the body's call for rest. To tell children that they must learn to sit still for more than a few minutes is about as futile as to tell them that they must learn not to want their meals. In later life, where the occupation is sedentary, disinclination to exercise often takes the place of restlessness. This can only be overcome by a strong effort of the will.

The experiment has been tried in a village school of dividing the school-boys into two sections: the first continuing to work as before, the second spending half the ordinary school hours in doing garden work. At the end of the term the gardening boys excelled the others "in conduct, in diligence, and in the results of study".

To be beneficial exercise must be regular. Charles Lamb alludes pathetically to his thirty miles a day when set free for his brief holiday from the routine of the India House. It probably did him more harm than good.

The object of exercise should be to use all the muscles, and not merely

to develop a few of them. This is especially to be remembered in the physical education of girls. Grace of movement comes with equal development of flexor and extensor muscles. For this reason exercise should be as varied as possible; walking should not be entirely given up for driving or rowing. Out-door games have generally the advantage of requiring great variety of movement. Exercise is best taken in the open air; if it is taken indoors, good ventilation is essential. The "constitutional" undertaken merely from a sense of duty is, no doubt, sometimes necessary; in principle it sometimes suggests the tread-mill. Many authorities consider that fatness where morbid conditions are absent is always due to want of exercise. The fat field labourer has yet to be discovered.

Excessive exercise may do serious harm. What is enough or suitable for one person may be too much, or unsuitable, for another. Age, occupation, strength, and other conditions must all be taken into consideration.

Sleep.—The power of dropping mental cares and worries at will is a great factor in long life. Both Mr. Gladstone and John Wesley could go to sleep almost at any moment. This is probably one of the secrets of their long lives and mental vigour unimpaired to the end.

During sleep the brain is in a comparatively bloodless condition. Anything that tends to check the flow of the blood from the brain prevents sleep; anything that tends to hasten that flow induces sleep. If this fact is borne in mind, sleeplessness will often suggest its own cure. The first thing is to ascertain the cause. It sometimes is hunger, in which case a light meal, if only a biscuit or a cup of milk, is the proper remedy, the blood being thereby withdrawn from the brain towards the digestive organs. On the other hand, an excessive amount of food, by causing congestion of the blood-vessels, has the opposite effect. Mental worry, brain work late at night, heavy bed-clothes, a tight collar to the night-dress, cold feet, defective ventilation of the bedroom—all, for the reason stated, tend to produce wakefulness. Rational treatment should aim at promoting a proper circulation of the blood. To resort to opiates is the height of folly.

Sleeping and waking ought to be ruled by the laws of periodicity, which govern the whole physical world. Sleeping in the daytime will not take the place of sleeping at night, and ought not to be indulged in, even by old people, more than can be helped.

The normal period of rest is from ten or eleven till six, seven, or eight in the morning. Young children want all the sleep they can get.

Prevention of Disease.—All disease is either directly or indirectly the result of law-breaking. The laws of health are the laws of nature; to break them is inevitably to incur the penalty of pain. "Nature's discipline is not a word and a blow, and the blow first; but the blow without the word. It is left to you to find out why your ears are boxed" (Huxley). If this connection between cause and effect were more generally kept in mind, there would be less money spent on medicine and more on good food, fresh air, and other rational means of keeping well. The essential rules of health are in themselves simple enough: pure air and water, proper food,

sufficient exercise and rest, personal cleanliness, and temperance in all things. When disease has come the doctor must bring his knowledge and skill to help nature to set things aright.

In health matters every man is his brother's keeper. He is responsible not only for his own health, but for that of his household, and to a certain extent for the health of his neighbours. This is often true even when the cause of the illness seems beyond control. Heredity may be at fault, yet it is now generally admitted that in most instances not disease itself, but a constitution predisposing to disease is transmitted. In such a case care, and intelligent attention to diet, fresh air, and wholesome surroundings, may strengthen the constitution and overcome the tendency.

The conditions of a man's life and work may be such that health must suffer. Yet much has been and is being done to remedy such conditions. Much more, too, can be done by the education of popular opinion in these matters; thus, it is said that in many cases where work is unhealthy, the work-people refuse to use the means provided for their protection. Yet, notwithstanding such neglect of proper precautions, the annual death-rate in England and Scotland has fallen since 1855 by more than one-fifth, and the consumption death-rate has been reduced by one-third.

Perhaps in no instance has the value of preventive measures been more thoroughly proved than in the case of small-pox. In the German army, since vaccination has been thoroughly enforced, there has not been a single death from small-pox.

The Advantage of Occupation.—The relation of steady work to health is shown by the following statistics. In 1880–82 mortality among the unoccupied was considerably more than twice as heavy as among the occupied. Of course this point must not be pressed too far. In the class of unoccupied are included those who are physically unfit for work, besides many really busy people. Still, the figures have their significance. It is better to wear out than to rust out, and the process is slower. The restlessness, which is nature's protest against muscular inactivity, has its parallel in the feeling of tedium, which shows that the faculties generally are not being employed. The effort to get rid of this feeling without removing its cause lies at the bottom of much of the foolishness and misery of the world.

The Advantage of a Hobby.—The greatest rest to an active body and mind is often change of work. A hobby may be defined as a secondary occupation, undertaken more for pleasure than for profit. It should be as unlike the work of life as possible. A man with a hobby has these advantages over the man without one: the pleasure and interest of his life are materially increased, he is brought into contact with people having tastes similar to his own, and his hobby may prove a resource when the more serious work of life is over.

SANITARY PRECAUTIONS.

Infection.—Infectious diseases are often the diseases of unhealthy houses. There is a close likeness between their processes and those of fermentation. Both are due to invasion by a specific micro-organism, both run a definite course, and both are favoured by special conditions. Air made impure by overcrowding, by bad ventilation, or by faulty drains; a tainted water-supply; dampness and darkness—these are the conditions which not only promote the multiplication of germs, but also by lowering the tone of health generally make people less able to resist them.

The bacilli of consumption, exposed in a poor, badly-drained cottage, retained their power of infection for months, whereas those similarly exposed in an airy, sunny, well-drained house were destroyed in a few days. Disease germs multiply by division and by spores. "The spores are round or oval glistening spots which appear in the substance of the bacilli and grow at the expense of the protoplasm until the sheath bursts and liberates them" (Whitelodge). They have great powers of resistance to any but the strongest disinfectants.

Disinfectants.—On the subject of disinfection there has been much popular misconception. Substances which can only hinder the growth of germs (antiseptics), and even deodorants, have been used with the greatest faith. It is useless to play with infection. Heroic measures are necessary. Anything short of thoroughness only gives false security. The essentials of a true disinfectant are:—"(1) That it shall be capable of killing germs and their spores; (2) that it shall be applied to every part; (3) in sufficient strength; (4) for sufficient time" (Reid). Sunlight, heat, and fresh air may be called natural disinfectants. That sunlight is the strongest germicidal power has been proved by experiment. Moist heat is more powerful and penetrating than dry heat. Putting infected articles into the oven is generally useless, because the heat necessary to disinfect will probably destroy the thing to be disinfected. Disinfection by superheated steam is probably the most perfect form of disinfection known. Boiling is the home method of applying moist heat.

The chemical disinfectants are only of real value in solutions or in gaseous form. Disinfecting powders and soaps must not be relied on.

Carbolic acid is poisonous, but has the safeguard of a strong smell. One part of carbolic to twenty parts of water is the weakest solution that may be trusted for real disinfecting purposes.

Corrosive sublimate (bichloride of mercury) is also poisonous, and having no smell can only be sold as a poison. One part in one thousand ($\frac{1}{2}$ oz. to 3 gallons of water) is sufficient. It corrodes metals.

Chloride of lime injures woven fabrics, but may be used for scrubbing out rooms. The right proportion is 2 ozs. to 1 gallon of water.

Formalin (formic aldehyde) is not poisonous, and does not injure colours or metals. Four ounces of formalin (40 per cent strength) should be added

to one gallon of water. By the use of tablets and a special lamp it may be employed as a gaseous disinfectant.

Sulphur dioxide, made by burning either sulphur broken into small pieces or a sulphur candle in a sealed-up room, is the most common form of disinfection by fumigation. The right amount is 1 lb. to 1000 cubic feet of air space. Too much reliance is often placed on this mode of disinfection. The thorough cleansing of a room afterwards and the action of sunlight and fresh air are of the greatest value. Sulphur dioxide is less strong and penetrating than formalin.

Potassium permanganate is in theory a disinfectant, but in practice it cannot be used in sufficient strength. It is, however, a valuable antiseptic.

The Flushing of Drains.—Drains should be flushed in order to remove solid matters that may have been deposited in them. This is specially necessary where there is little fall, and during hot weather. To be of use, the volume of water must fill the pipe. A bucketful suddenly thrown down is better than a tap left running all day. The practice of pouring large quantities of weak disinfectants down drains is quite futile. A bad smell is a danger-signal, and if flushing with water does not remove it, the drain should be properly examined. A water-closet should be flushed from a separate service cistern, capable of discharging two or three gallons rapidly at a time.

Dust-bins.—The healthiness of a house depends largely on the quick and thorough removal of all refuse. The ideal method of dealing with organic waste matter is to return it to the ground. If buried just below the surface in clean, dry soil, material which would otherwise be offensive and harmful is changed into harmless inorganic salts, which in their turn are taken up by plants, again to form part of living substance. House refuse is made up of ashes—there are no waste cinders in a well-regulated household—soot, broken crockery, scraps of food, vegetable debris, bones, papers, and tea-leaves. Into the large, old-fashioned dust-bin all this refuse was thrown indiscriminately, where by the action of rain and the sun's heat it was soon converted into a mass of corruption which was a real source of danger to health.

If a fixed dust-bin must be used, it should be small, not on any account exceeding six feet in cubic capacity. It should, if possible, be not less than six feet from the dwelling-house and fifty feet from any source of water-supply. It should be constructed of, or lined with, impervious material, above rather than below the level of the ground, covered, ventilated, and easily accessible for frequent removal of the contents. A movable receptacle is better. Galvanized pails with covers, which are in some places provided by the authorities, can be bought at prices varying from 10s. to £1 or more.

No organic waste matter should ever find its way into a dust-bin. In the country it can be buried, while ashes and soot can be used in the garden. Fowls will help to dispose of kitchen refuse. In town there is

no resource but to burn as much as possible. This can generally be done without offence where there is a good modern range. With an open fire-place there is greater difficulty. Damp material must often be dried by being put under or near the grate before it can be burnt.

The Public Health Act empowers the local authorities to undertake the emptying of dust-bins, in which case, if they fail to do the work within seven days after notice from the occupier, they become liable to pay him a fine not exceeding five shillings a day till the work is done. If, however, this duty is not performed by the local authorities, they may compel householders to empty their own dust-bins. It is actionable to put rags, poul-tices, flowers, or other rubbish from an infected room into a dust-bin.

Care of Sinks.—Sinks are used for the discharge of liquid waste, such as water from cooking and cleaning. The water in which cabbages have been boiled is better emptied out of doors. Great care should be taken to prevent solid matters from entering the sink waste-pipe. The grating which protects it should not be removed except when the sink is being flushed with clean water. All waste-pipes, whether from sinks, lavatories, or baths, should discharge outside the house over a gulley-trap or, better still, into an open channel leading to one. It is essential that both channel and trap should be kept clean. The syphon trap formed by the pipe before leaving the house is necessary, because otherwise air would be drawn up through the dirty pipe into the warm house. These traps dry and cease to act when the sink is not often used. They should have screw stoppers in the lowest part for cleansing purposes. In large kitchens grease-traps are needed, and should be cleaned daily. Flushing with hot water will keep the syphon traps, but not the drain beyond, free from the accumulation of grease.

Ventilation.—The simplest way of ventilating a house is to keep a window open in some such central position as the staircase; to open windows top and bottom in all rooms whenever possible; to leave bedroom windows always open a few inches at the top; and never to block up the chimneys by closing the dampers.

A good ventilator is made by introducing a piece of wood under the lower sash. It should be at least 6 inches deep and must fit perfectly, or it will cause a draught. The air passes up through the space between the two sashes where they overlap.

PROPER FOOD.

Purposes of Food.—Food is taken with a threefold purpose: the production of heat, the gain of working-power, and the repair of tissue. All the higher animals, when in good health, have an even temperature, which is maintained by combustion of material derived from food and regulated by evaporation from the surface of the body. Work and heat are

only different manifestations of the same force. Work is done whenever a muscle is contracted; even when a person sits still all day, the heart, lungs, and other organs are working. It has been calculated that the work of the heart in twenty-four hours is equal to that done by a tolerably heavy man in the ascent of Snowdon. More food is needed when more work is done.

Heat and energy may be obtained from all foods, but especially from fats, and in less degree from sugars and starches. The two last are called carbohydrates, because they are made up of carbon, hydrogen, and oxygen. Fat is also composed of the same elements, but in different proportions. As a rule, the colder the climate the more fat is required. It is also valuable for other reasons, and if it is deficient the general health suffers.

The body is composed of several other elements besides carbon, hydrogen, and oxygen, the most important being nitrogen. It follows that if the body is to be properly repaired, or if there is to be proper growth, nitrogen must be present in food. The chief sources of nitrogenous food-stuff, which is called proteid, are meat, eggs, fish, milk, and cheese. Peas, beans, and lentils contain a vegetable proteid, the only one consumed by some Eastern nations. Too little proteid is often taken by the poor, too much by the rich. The poor needle-woman, with her diet of tea and bread-and-butter, depends for her supply on the gluten of bread, which is quite insufficient.

"The rich classes of England", says Dr. Parke, "are certainly too large meat-eaters. For example, follow a dinner at a rich man's table to see what the guests will take: a soup into which meat largely enters; fish; two or three middle dishes, probably all meat of some kind; perhaps a joint and game. The farinaceous food is scarcely touched; and when it is remembered that at breakfast and luncheon meat has also been eaten, the very carnivorous nature of the diet will be evident." Fresh vegetables and fruits are very valuable for their salts and organic acids. Whatever may be the cause of scurvy, it never attacks those who have plenty of such food.

A large proportion of vegetable substance is cellulose, or woody fibre, and from it little nourishment can be gained. It, nevertheless, has its use; for although it does not enter into the system, it helps to attenuate the food, which should not be taken as a general rule in a concentrated form. Excess of cellulose, however, especially if badly cooked, overtaxes the digestive organs.

Pepper, mustard, and all flavouring matters, not only help to give variety, but also stimulate the nerves of taste and smell and the digestion generally. While beneficial in moderation, they are hurtful in excess, besides blunting the sense of satiety, which tells that enough food has been taken. Such substances as tea, coffee, alcohol, and tobacco affect the central nervous system. Such food as bouillon, beef-tea, and extract of meat, are food accessories rather than foods; they are strictly stimulating, but their chief recommendations are a pleasant taste and smell.

Without entering upon the vexed question of the dietetic value of alcohol, it may be said that small doses stimulate, large doses depress, and medium doses act as a sedative. It should never be taken early in the

day, or with the idea that either the mental or the bodily working powers will be increased by its consumption. Though giving a transitory feeling of warmth, it really lowers the power of resisting cold. It should not be taken fasting. Healthy and robust people do not need it, and it should never be given to children except under medical orders. Wine, beer, and stout do not derive their dietetic value wholly from the presence of alcohol. There is scarcely a nation that does not use sedatives of one kind or another, and the comfort derived from tobacco, especially in middle life and old age, fully justifies its use in moderation.

Digestion is largely carried out by the action of ferments, which bring about chemical changes in the food without being themselves changed. They are contained in the juices which are poured out upon it in different parts of the alimentary system, beginning in the mouth with the saliva. Two of these ferments act on starch. These are both absent in young infants; starch foods are therefore of no value during the first few months of life. Other ferments act on proteids. Digestion will, generally speaking, be thorough and easy in proportion to the amount of surface presented to the action of these ferments. Even the proverbial twenty bites to a mouthful are insufficient for some forms of solid food. It is not of so much importance when food is taken as that meals should be regular and at proper intervals. In the arrangement of meals much depends on a person's work, age, and habits. As a rule the best time for the heaviest meal is when the work of the day is over, yet not late enough to interfere with sound sleep. Eating between meals is objectionable, for the stomach needs some rest. The interval should, generally speaking, be not more than five or six hours, nor less than three. During the period of growth more food is needed than later in life, especially more proteids and fats. The fat of meat is often disliked by children because they cannot digest it. A child's diet should include a plentiful supply of new milk. The natural desire for sugar in childhood is right and healthy, but sweet things should rather be given in the meals than eaten between them. The loss of teeth in old age is nature's way of teaching that old people are best with light, soft, easily-digested food. The habit of drinking large quantities of fluid while eating is bad. The man who laughs and talks over his dinner will probably digest it better than he who swallows it down in moody silence.

There is a natural desire for variety in food. No diet, however theoretically correct, will be found satisfactory if too restricted. The health of the inmates of institutions has been improved by providing more varied, though not necessarily more nourishing, food.

PROPER CLOTHING.

In cold and temperate climates the body needs to be protected from undue loss of heat, and in tropical countries from the sun's rays. The character of the British climate makes the retention of heat especially important. In the constant changes of wind and weather avoidance of chill is more difficult than it would be if the cold were intenser, but the air stiller and drier. Thinly-clad people really need more food, and this intensifies the sufferings of the very poor. A starving man starves more quickly if insufficiently clothed. This is important to remember in relation to children, who need more clothing than grown-up people, as their food goes principally to growth and development.

The temperature of the body is regulated by evaporation from the skin, as well as by conduction (by contact with colder objects) and by radiation. When it is unduly lowered, as it is by wearing damp clothes, the person suffers. This matter of damp clothes is too important to pass by without a few words of explanation. When a solid becomes a liquid—for instance, when ice becomes water—it absorbs a certain amount of heat which is not registered by the thermometer, and is therefore called “latent”. When the liquid becomes a gas—for instance, when water becomes steam—still more latent heat is absorbed. Obviously, this heat must be drawn from external objects, which in consequence undergo a corresponding fall of temperature. This is precisely what happens when damp clothes are worn. As the moisture evaporates, it withdraws heat from the body, thus causing a sensation of chilliness. In the case of a cold-water compress the oil-skin covering prevents evaporation, except in a very slight degree, and there is consequently no chill. But there is no such protection over damp clothes, and the effects are most injurious to health, especially as the moisture, being a good conductor, helps the heat to escape.

Two properties, therefore, are needed in clothing. Firstly, it should be hygroscopic, that is, capable of absorbing moisture without becoming wet; secondly, it should be a bad conductor of heat.

Wool and silk have high absorbent powers; they take up moisture quickly and give it out slowly, and therefore are to be recommended for underwear. As wool is the less expensive, it is the more generally used. Cotton is less hygroscopic than wool, but more so than linen.

The non-conducting powers of a material depend chiefly on its texture. In cold weather the fur of animals not only becomes thicker, but also lies less closely to their bodies, and on a cold winter day the birds may be seen to puff out their feathers; by these means layers of warm, still air of very non-conductive quality are held round their bodies. Woollen material, if not too closely woven, holds such a layer of air in its meshes. It is claimed for some thick, porous cotton materials that they do this, and there seems no reason why they should not. For the same reason loosely-fitting are

warmer than tight garments, while two are warmer than one, even though it is as thick as both combined.

Clothing should be equally distributed over the body. The "hardening" which is supposed to result from the exposure of the neck, arms, and legs of little children, is not unattended by danger. Children have less power of resisting cold than grown-up people. Small necks and limbs are very pretty, but the æsthetic pleasure derived from their contemplation is hardly sufficient to justify the risk to the child's life or future health. Other instances of unequal clothing may be found in the wearing of fur collars and tippets with comparatively thin dresses.

Clothing should be light; great weight depending from the hips must be injurious, while anything which impedes free movement is ungraceful. Tight, narrow ligatures are always bad. Garters tend to produce varicose veins, and braces are better than belts.

All clothing in contact with the skin should be changed frequently, and exposed to the air whenever possible. The daily ventilation of bed-clothes is very important. Heavy counterpanes should not be used at night, and warm blankets are better than impermeable coverings, such as eider-down quilts.

Clothing should be made to fit the body, not the body to fit the clothes. It has often been the endeavour of mankind to improve upon nature's work in the construction of the human form. This tendency may be seen at the present day in the misshapen heads of the Chinook Indians, in the Chinese lady's foot, in the use of stays, and in the tight shoes only too often worn. The compression of the waist means displacement of the liver, lungs, and stomach; stays are not needed in early girlhood, and should on no account be worn. Later, when the figure is properly developed, though still unnecessary, they cannot do much harm if not tightly laced. Compression of the foot by the ordinary boot is only less injurious because no vital part is affected. Heels are worn for economy and to avoid splashing, but high heels not only weaken the muscles of the leg by shortening and relaxing their attachment to the heel, but throw too much weight on the forepart of the foot.

The first canon of æsthetics as regards clothing is that it should have the qualities of freshness and cleanliness. Picturesque dirt is pleasing only at a distance. To be really beautiful, clothing must be comfortable, and should suit time, place, and weather. It should disguise as little as possible the natural beauties of the human figure, but, alas, is often needed to conceal its defects.

It has been said that no work of man is more beautiful than the ordinary boat, its beauty lying in the fact that every line in its construction fulfils a definite purpose. The most artistically pleasing garments are generally those which serve their purpose best. A working-girl looks better in her cotton-gown than in her mistress's cast-off finery. Construction must come first; decoration may follow.

SICKNESS.

FAMILY MEDICINE CHEST.

A bottle here, a bandage there, a powder somewhere else, and each in the very last place in which one would think of looking for them—such is the “medicine chest” of only too many families. When an accident occurs, the patient is left to his sufferings while the proper remedy is searched for, everyone attempting to solve the question, “Where did I see it last?” In the well-conducted household such a state of things cannot exist.

The trouble of arranging and fitting up a properly-equipped domestic surgery is slight, and the advantage of such a convenience when completed is inestimable.

A white-wood wall-cupboard, such as may be purchased anywhere for a few shillings, forms at once a neat and compact family medicine chest. Though the capacity be limited, it will hold all that is necessary for cases of emergency, and it has the advantage of being placed beyond the reach of children.

Medicines in Bottles	Splints		Poisons
	Lint & Triangular Bandages	Roller Bandages	
Medicines in Powder	Clean Sponges	Oiled Silk	Medicine Glasses Measures
	Cotton- Wool	Tweezers, Scissors, Pins, Pot of Vaseline	

Fig. 564.—Divisions of Shelf or Cupboard for Family Medicine Chest.

for a small sum. The most suitable method of division will be seen from a glance at the accompanying diagram (fig. 564).

Cautions against Accidental Poisoning.—All substances of a poisonous nature must be kept in a corner by themselves. Mere isolation, however, is not sufficient to prevent a poison from being picked up in a hurry, or in the dark, and unwittingly administered with disastrous results, therefore by a modification of the Pharmacy Act, which came into force on the 31st day of January, 1899, it is enacted that “in the dispensing and selling of poisons, all liniments, embrocations, and lotions containing poison, be sent out in bottles rendered distinguishable by touch from ordinary medicine bottles”, and it is also enacted that the label must state that the contents

are not to be taken internally. Chemists accordingly now dispense poisons and poisonous liniments, &c., in bottles that are ribbed, usually hexagonal, and coloured. By this modification of the law it is to be hoped that the many sad cases of poisoning arising through mistakes in bottles will be avoided.

Contents of Chest.—A large stock of drugs is seldom advisable. So many have a tendency "to go bad", that it is always more satisfactory to buy them just as required. The following articles, however, should have a permanent place in the family medicine chest:—

DRUG.	ACTION.	ADULT DOSE.
Antipyrin.....	Reduces temperature in feverish conditions	5 grains in water every hour for three hours
Bicarbonate of Soda.....	Given shortly before meals it increases the appetite. Taken after meals it counteracts acidity	8-15 grains in water
Boracic Acid.....	Antiseptic. When dusted on bad-smelling feet it prevents the disagreeable odour	Not given internally
Carbolic Oil.....	A useful application for sores and burns	Not given internally
Castor-oil.....	A safe and certain purgative; also a useful protective to the eye if dropped into it when injured by quicklime	1-2 table-spoonfuls
Chlorate of Potash Lozenges.....	Relieves inflammation of mouth and throat	One as required
Condy's Fluid.....	A disinfectant and deodorizer; diluted, used as a gargle for sore-throat, &c. &c.	For instructions, see directions on bottle
Dover's Powder.....	Causes profuse perspiration. Useful for colds	5-10 grains in hot gruel
Ipecacuanha Wine.....	Emetic, producing vomiting in from fifteen to twenty minutes after being taken	A dessert to a table-spoonful in warm water
Laudanum.....	Useful in diarrhoea	10-15 drops in water
Lead Lotion.....	Modifies the discoloration of bruises and of black eyes	Not given internally
Liquorice Powder.....	A useful habitual laxative for constipation, anæmia, &c.	½ to 2 tea-spoonfuls in water
Mustard.....	Emetic. Strengthens poultices	A table-spoonful in tepid water
Oil of Cloves.....	Relieves toothache when dropped on cotton-wool and placed in the cavity of the tooth, care being taken to avoid the skin of the mouth and cheeks	Not given internally
Phenacetin.....	Relieves neuralgia and tic-douloureux	5-10 grains, repeated in two hours if required
Quinine.....	In small doses it is a general tonic; in large doses it relieves feverishness	As a tonic, 1-4 grains. In fever, 5-15 grains
Sal Volatile (Aromatic Spirit of Ammonia).....	A general stimulant in fainting conditions	½-1 tea-spoonful in water
Sulphate of Zinc.....	The best emetic	10-30 grains in tumbler of warm water
Tincture of Iodine.....	Counteracts swelling of joints and inflammations	Painted on the part with a small brush
Turpentine.....	Relieves the pain and congestion in rheumatism, and in chest and throat affections	A few drops sprinkled on flannel wrung out of hot water
Vinegar.....	Counteracts the poisonous effect of soda, potass, and ammonia	2 tea-spoonfuls in water

Surgical Appliances.—Two triangular bandages; eight roller bandages;

lint or old linen; oiled silk; cotton wool; vaseline; wooden or stout cardboard splints; clean sponge; scissors; tweezers; card of safety-pins; a medicine glass; a glass measure; a feeding-cup; a rubber hot-water bottle; an enema syringe; linseed-meal.

Of all the drugs the lead lotion and laudanum are the only ones which need specially be placed in the "poison" division of the cupboard. With regard to the antipyrin, phenacetin, and Dover's powder, each of which has to be measured with some exactitude, it would be best, when buying them, to ask the chemist to weigh out six powders of each drug, each powder containing 10 grains. These drugs may, therefore, be kept in three boxes, each box containing a number of 10-grain powders, which can be subdivided, if desired, before use.

PRECAUTIONS IN CASES OF INFECTIOUS DISEASE.

Sick-room.—In every case of infectious illness the isolation of the patient is a matter of the first importance. A sheet saturated with some disinfectant fluid, such as carbolic acid (one to twenty), should be hung outside the patient's door. The ventilation of the sick-room must be perfect, and the air should be kept sweet by sprays of the disinfectant. All vessels must have some of the disinfectant always in them, and all discharges from the patient must be emptied immediately, some of the disinfectant being poured down the closet after them.

Precautions for Household.—The other members of the house must on no account go near the sick-room, or handle any article which has been therein. Otherwise the rest of the household will best protect themselves by attending carefully to the state of their general health, taking nothing which does not agree with them, having abundance of sleep, and under the doctor's directions having plenty of outdoor exercise.

Disinfection of Sick-room.—The sick-room cannot be thoroughly disinfected until it is no longer inhabited. One or more tubs with water in them are placed in the centre of the floor, and sulphur (1 lb. for each 1000 cubic feet of space) is then poured into earthenware vessels placed upon bricks laid in the water; a little methylated spirit is then poured on the sulphur, and a light applied. All windows and crevices should first be tightly closed, and the door quickly shut. Next day the room is re-entered and the windows are opened. The room must be thoroughly washed and cleaned with a strong solution of disinfectant, and the furniture treated in the same way. The walls and ceiling should be brushed, and the wall-paper removed.

Disinfection of Clothing.—Clothes and bedding are best "baked" for about an hour at a temperature of 250° Fahr. This is usually undertaken by the Public Authority. Clothes washed at home should, as soon as they leave the sick-room, be steeped in 1-20 carbolic acid.

Fever Hospitals.—However perfect the isolation, and however careful the nursing, no home treatment of a fever case can approach that afforded by a hospital set apart for fever cases. The difference in expenditure between a hired nurse and hospital fees is very little, and the advantage to the patient cannot be over-estimated.

MANAGEMENT OF SICK-ROOM.

Choice of a Doctor.—It has been said that next to the choice of a profession and a wife comes the choice of a family physician. Whether this be true or not, the fact remains that the choice of a doctor is a matter which is not generally considered with the seriousness which it deserves.

The practice of changing the doctor every other year is too common in towns, even amongst those who have not a removal to offer as excuse. Without good cause no man would ever think of dismissing a confidential clerk; but for the most trivial reasons people will leave the physician who is beginning to understand their systems, and will place themselves in the hands of a stranger who has to commence that understanding process, not where his predecessor left off, but where he began.

It cannot be too plainly stated that a doctor who has attended a patient throughout an illness knows more about him than any other doctor who may come after him, and that the knowledge so derived may in itself be the means of enabling that doctor to save the patient's life on some subsequent occasion.

This choice of a doctor is too often put off until someone has been taken ill. Such a course is unwise from both points of view—from that of doctor and that of patient. The thought of being visited by a stranger is not conducive to the welfare of the patient, who should be able to look on the coming of the doctor as the coming of a friend. It is but little trouble to call on the doctor upon whom one's choice has fallen and inform him of the desire to have his services when occasion may arise. In due course the call will be returned, and then when illness does occur, patient, friends, and doctor will meet each other as acquaintances.

Duties to the Doctor.—The doctor has certain duties to perform towards the families whom he attends, but they on their part have equally certain duties to perform towards him. The more important are the following:—

1. When he is required send for him, if possible, before ten o'clock in the morning. He has many patients to see, and cannot give sufficient time to each if he has to go over the ground twice. When it can be done, he should have long enough notice to enable him to arrange his visits.
2. If the patient is taken ill during the day do not wait till late at night before asking the doctor to call. He is but a human being like his neighbours, and requires rest.

3. When he comes pay strict attention to his instructions, and follow them to the letter. If the patient's friends think they know better than the doctor, let them attend the case and take full charge. The responsibility will then rest with them.

4. Let the patient endeavour to be cheerful. Remember that if it be true that while there is life there is hope, it is also true that while there is hope there is a better chance of recovery. The Arabs tell how one of their chiefs once met King Cholera. "Whither dost thou go?" exclaimed the chief. "To yonder city," replied the Cholera, "to kill ten thousand people." A few weeks afterwards the same chief met King Cholera returning. "Rascal!" he cried, "thou hast deceived me. Didst thou not say thou wert to kill ten thousand people, and lo, full twenty thousand folk have died." "Friend," said the Cholera, "thou blamest me unfairly. I have but killed ten thousand as I said; 'twas fear that killed the rest."

5. Take medicines punctually and regularly at the times directed by the doctor. The effect of some drugs does not pass off as quickly as that of others, and this fact the doctor has to bear in mind when writing his prescription. If doses are taken just when remembered, or according to caprice, the effects of the one may not have passed off before the succeeding one is taken, and the combination may be prejudicial to health.

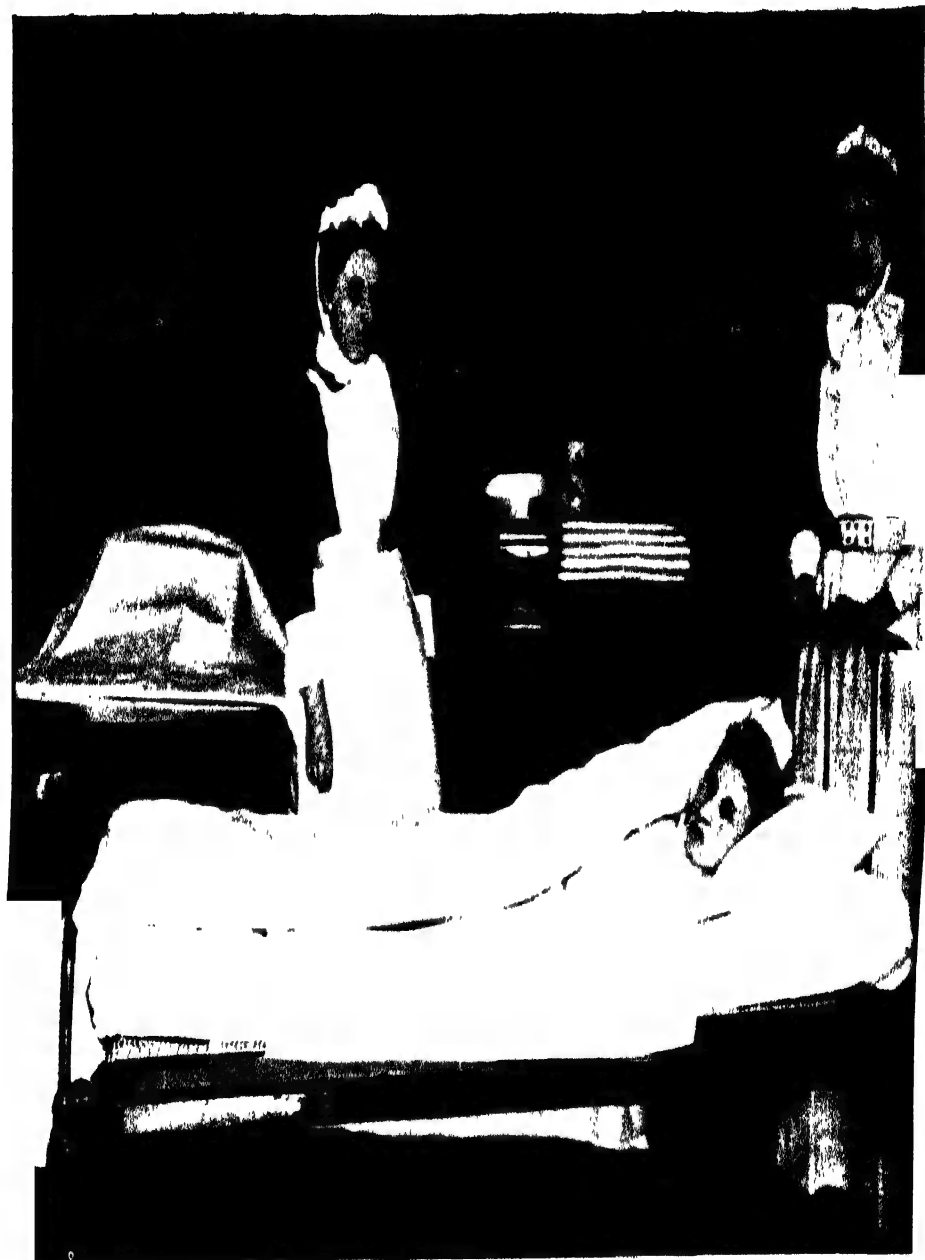
6. Be particularly careful to give the patient only such articles of diet as the doctor orders. It is mistaken kindness to tempt the patient with little dainties which should not be taken. The tendency is well seen in the wards of any hospital, where, after visiting hour, it is an everyday experience to find fruit, cakes, and sweets hidden away beneath the patients' pillows.

7. Do not attempt to conceal facts from the doctor. If he is to treat the case successfully he must have the full confidence of his patient.

8. On no account call in another doctor unknown to the one who has the case in charge. The laws of medical etiquette forbid one doctor to attend another's patients without the latter's knowledge, and the patient who causes two doctors to commit so marked a breach of etiquette will lose both.

Fees.—In the matter of doctors' fees there is no fixed standard. Each individual practitioner has his own charges. Generally speaking, however, they are calculated on the rental of the patient's house. If they are not known, it is best to ask the doctor what they are when first he is called in. There is no discourtesy in doing so, and it prevents the possibility of any subsequent unpleasantness.

Sick-clubs.—At first sight the idea of joining a sick-club—"attendance and medicine for 1s. a week"—seems very tempting, but looked at from a purely business stand-point, the apparent benefits are not so great. It stands to reason that a doctor with a hundred to a hundred and fifty patients to see every day cannot devote to each the time and attention of the ordinary general practitioner, nor is it in human nature for a man



1. The baby's bottle, folded over to close the draw-sheet, pinned down on the top of the ordinary sheet

NAWAPSA, ALASKA, 1941

who is paid at the rate of 3*d.*, or it may be 6*d.* a visit, to bestow upon his patients the same care as one whose every visit means half a crown or more.

Consultations.—In the course of a serious illness there is probably no matter which gives rise to more unnecessary worry than the idea of a consultation. The family are afraid to propose one for fear of offending the doctor; while if he himself makes the suggestion, they immediately jump to the conclusion that he does not understand the case. No doctor will ever object to meeting another practitioner in consultation. On the contrary, he will be only too glad to have the opinion of a professional brother; and as in the ordinary affairs of life one likes to get the opinion of a friend in negotiating a difficult situation, he often requests a consultation that he may have the opportunity of obtaining counsel regarding the advisability of some fresh line of treatment he proposes to adopt.

Preparation of Room.—As a rule illness comes on so suddenly that there is no time to specially prepare the sick-room in advance. Such preparations as are made must necessarily be hurried, and not infrequently the patient is already in bed in the room before these preparations are commenced.

A single bed some three feet wide is preferred by doctors and nurses for their patients. Spring mattresses are the most hygienic. The height of the patient from the ground should be very little under 3 ft. Whatever may be its position at other times, the bed during illness must be so placed that there is a free passage at either side of it, and it should, if possible, occupy a position between the fireplace and the door. Better ventilation is thus afforded to the patient, and the labour of the nurse is lightened in a marked degree. A hair mattress is preferable to either wool or feathers.

The room should be made bright and cheerful; pleasant surroundings are half the cure. Heavy curtains should be replaced by lace or muslin ones; the windows should be well polished, that the apartment may be well lighted, and a few plants may be placed throughout the room. All unnecessary furniture which can conveniently be carried should be removed: a couple of chairs, two tables, a wash-stand, and a sofa or easy-chair are all that are required. The temperature of the sick-room should be kept at 60° F., and thorough ventilation secured by having the window open a few inches from the top both day and night. Before the hour of the doctor's visit be careful to see that clean cold water, clean hot water, clean towels, soap, pens, ink, and paper are all ready for him if required.

Washing the Patient.—Nothing is so refreshing to an invalid as the sponging of the face and hands once or twice a day. Every morning the hands, arms, face, and neck, and once a week the whole of the patient's body, should be washed with soap and warm water, and afterwards thoroughly dried with a soft, warm towel. A few drops of toilet vinegar added to the water will, in most cases, be grateful to the patient. In addition to the washing of the hands and face, the patient's hair should be daily combed, and his finger-nails cleaned and trimmed as occasion may require.

Changing Sheets.—The changing of the upper sheet presents no difficulties, but the method of renewing the lower one requires a word of explanation. When the fresh sheet has been thoroughly aired, the patient is turned over on his side, and the one side of the soiled sheet rolled up lengthways and pushed as close as possible to the patient's side. The clean sheet, half of which has previously been rolled lengthways, is then placed with its roll next that of the soiled one, and the unrolled half spread over the half of the bed from which the soiled sheet has been rolled. The patient is then gently turned over both rolls on to his other side, the soiled sheet removed, and the fresh one unrolled.

Prevention of Bed-sores.—Except in certain paralytic cases bed-sores never need occur; when they do, their existence is due to inattention and careless nursing. A bed-sore is caused by continuous pressure on some bony prominence, and it is the duty of those in attendance on the patient to see that such pressure is avoided. With proper care this can be done, but when once a bed-sore has obtained a start it spreads with surprising rapidity, and is extremely difficult to treat. The slightest daily alteration of position, a soft, elastic, and smoothly-made bed, and a free dusting of the parts with violet powder (or, if need be, bathing them with whisky and water) are the chief points to be borne in mind. If a bed-sore should develop, or if there should be any soreness over a bony prominence, the attention of the doctor must immediately be drawn to the fact, for if unattended to, the ulceration will soon affect a rapidly-extending area.

Conduct in the Sick-room.—Avoid all fuss and unnecessary confusion. Nothing irritates a patient more than bustling to and fro. By deciding swiftly what is to be done and then proceeding to do it, all flurry is avoided.

On entering the room open the door boldly, though without avoidable noise. To turn the handle gingerly only causes it to grate and screech.

Never carry on a conversation just outside the sick-room door, and never whisper inside the room. If anything has to be said, let it be said in ordinary conversational tones. Otherwise the patient imagines that the conversation refers to something which he is not meant to hear, and at once jumps to the conclusion that it concerns some unfavourable symptom of his illness.

Let whatever has to be done in the room be done quietly. The substitution of a stick for a poker in mending the fire is only one of many such resources which will suggest themselves to the sympathetic nurse.

Do not admit friends to the sick-room without permission from the doctor. A little excitement may undo all the good which has been done and be the means of giving rise to unfavourable symptoms.

The question of stimulants—if any, and how much—must be left entirely to the doctor to decide. His instructions on this point must be rigidly adhered to.

Never give the patient too much food at a time, nor leave lying about in the room what he has been unable to finish.



1. The soiled sheet is rolled up lengthwise close up to the patient, and the clean sheet, half of it also rolled up, placed alongside the soiled one.

MAWAELALAK JUNE 2004



2. The patient has been turned over on the other side, so that now the rolls of both soiled and clean sheets can

Temperature and How to Take It.—The patient's temperature is often an important factor in the diagnosis of his disease. In many illnesses it forms the earliest outward sign of important changes in the condition of the internal organs, and as such, has to be carefully noted from time to time.

To save the expense and trouble of otherwise unnecessary visits, the doctor often entrusts some member of the family with the taking of the patient's temperature at certain intervals between his visits. For this purpose he leaves a special kind of thermometer, and gives directions as to how the temperature is to be taken. There is nothing at all difficult in the process, anyone can do it with a little care. The clinical thermometer (fig. 565) is constructed on the same principle as an ordinary bath thermometer, but on a smaller scale, and contains an index within itself. The normal temperature of the body heat— 98.4° F.—is usually marked on the glass of the thermometer by a line or an arrow.

Shake down the mercury in the thermometer to a little below the arrow (in all probability, however, the doctor will do this himself before leaving it), place the bulb of the instrument in the arm-pit, pushing it well up, and hold the arm close to the side of the chest. In five minutes remove the thermometer and see how high the mercury has risen. Replace the instrument in its case, taking care not to shake it in any way, and the mercury will remain at the height to which it has risen until the doctor pays his next visit and notes the temperature for himself.

Temperature Charts and How to Mark Them.—In some conditions it is necessary to take the temperature every four hours. When the patient lives in the country and the doctor has to drive several miles to visit him, it is usual to mark the temperature upon a special form of chart (fig. 566).

In this chart (a three-week night and morning one) it will be noticed that each degree of temperature is divided into several subdivisions, the degrees on the left side being according to the Fahrenheit scale, those on the right side according to the Centigrade. As the former is the ordinary scale in this country, only the left side of the chart need be considered. The normal temperature, 98.4° , is indicated by a thick line drawn right across the chart, and similar thick lines will also be observed drawn at intervals from top to bottom. These latter divide the weeks one from the other. Between them are thinner lines running in the same direction. These divide the days. The daily divisions are in turn subdivided by the letters m. e.—the initials of the words morning and evening—each daily division thus recording the temperature twice within the twenty-four hours. The temperature should be taken at the same hour each morning



Fig. 565.—Clinical Thermometer. a, Mercury; i, index; r, normal temperature (98.4°).

and each evening, and a glance at the diagram will explain the method of marking the result upon the chart.

Baths.—Of baths there are several varieties, each with its special points of value, but the various forms of water-baths are those most commonly in use.

The cold bath is one of a temperature of from 32° to 60° . Its effect is to cool the skin and the blood in the blood-vessels on the surface of the body. Indirectly, and as a result of this cooling process, the heart is stimu-

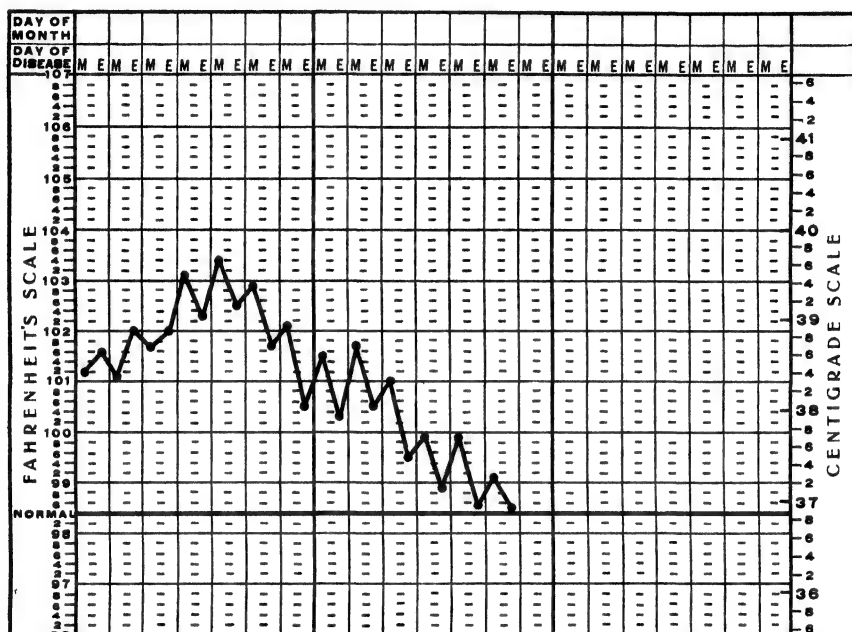


Fig. 506.—Temperature Chart.

lated and beats faster, and the breathing becomes quicker and deeper. The invigorating effects of such a bath are familiar to all who take their morning tub, and in cases of fever it is frequently recommended on account of its cooling action.

In the latter instance the patient is not immediately subjected to the cold, but is first placed in a bath of tepid water, to which cold water is gradually added until the temperature is reduced to from 80° to 40° , according to the directions given by the doctor. A quarter of an hour is as long as the patient should be allowed to remain in the water—if any shivering occurs he must be taken out at once—and on being removed he is dried and laid between the blankets.

For those whose constitutions cannot stand the well-marked effects of an absolutely cold bath, the temperature may with advantage be slightly raised. The action will be the same, but, naturally, less pronounced.

In a tepid bath the temperature ranges from 85° to 95° . It is the bath

most commonly used for purposes of personal cleanliness. For fever it is valuable as a means of soothing the nerves, and through them the accompanying restlessness, while at the same time reducing the temperature.

The warm bath has a temperature of 95° to 100° . It promotes the circulation throughout the surface of the body, opens the pores of the skin, increases the perspiration, and has a soothing action on the nervous system. Its action, therefore, gives a clue to the conditions for which the warm bath may be used, viz., as a means of promoting the flow of perspiration in fevers and colds, as an allayer of excitement, and an alleviator of pain.

The hot bath varies in temperature from 100° to 106° . In action it is similar to the warm bath, but obviously its effects are much more marked. Localized hot-bath effects may be obtained from bathing any particular part of the body with hot water, or from applying to such a part a cloth dipped in hot water and then wrung out dry. (See "Fomentations".) By this means the blood is drawn to the part, thus relieving any congestion in other regions, and soothing pain. The common habit of bathing the feet in hot water at the onset of a cold is, therefore, clearly based on sound scientific reasoning, the increased circulation promoted by the foot-bath withdrawing the surplus of blood from the head and chest.

The Wet Pack.—This is seldom employed except by doctors' orders. It is not difficult to carry out, and in suitable cases proves most valuable. Two full-sized blankets are spread over the bed, and a sheet which has been thoroughly wetted with cold water is laid smoothly on the top of them. If possible it is an advantage to have a mackintosh between the blankets and the bed. The patient is stripped and placed on the wet sheet, which, together with the blankets, is rolled round him, one side being brought over the other and tucked in at his feet. More blankets are heaped on the top of him, and he is kept in the packing for from twenty minutes to an hour. The patient is then removed, rubbed dry with a warm towel, and again put into the bed from which he was taken at the commencement of the packing. The effect of the wet pack is to reduce the temperature, dispel restlessness or delirium, and promote sleep.

Poultices.—In the description of the hot bath reference was made to the effect of placing on any part of the body a cloth wrung out of hot water. In the application of a poultice the object in view is a similar one. The local circulation is increased, and the tissues are relaxed to make room for the additional supply of blood which is thus drawn from, and thereby relieves the congestion of, a distant region. At the same time, should there be any local swelling the pain is alleviated and the tension is reduced. The chief points to be remembered in the making of poultices are, firstly, to see that the water is boiling, and secondly, that no time is wasted in mixing the ingredients.

All poultices should be applied as hot as the patient can bear them, and as a rule they should be changed every two hours. When removed they should be got rid of at once by burning, and the poulticed area should be covered with cotton-wool to prevent the patient catching cold.

The following are the more common forms of poultice and their methods of preparation:—

Linseed-meal Poultice.—Scald out a basin, pour into it boiling water, and gradually add the linseed-meal, stirring all the while with a spoon which has previously been scalded like the basin. The degree of consistency which should be aimed at is that of batter pudding. The mixture is then emptied out on a piece of linen or an old rag a little larger than the poultice required, and with a knife is spread evenly to the thickness of about a third of an inch. It is then covered by a layer of muslin, and applied as hot as can be borne. The surface of the poultice must be placed upon the skin itself.

Linseed-meal and Mustard Poultice.—This is made in the same way as the ordinary linseed poultice. Care must be taken to see that the meal and the mustard are thoroughly mixed, otherwise the mustard will collect here and there and produce one or more blisters.

Porridge or Oatmeal Poultice.—Proceed in the same manner as for a linseed poultice. But as oatmeal is heavier, the linen should be fairly strong.

Bread Poultice.—The art of making a bread poultice lies in hitting the happy medium between crumbliness and sloppiness. The process is similar to that employed in the preparation of the linseed poultice, crumbed stale bread being used instead of the linseed. The addition of a few drops of oil is advisable to prevent the poultice from sticking to the skin.

Starch Poultice.—A starch poultice is not so common as the others just described. It maintains its heat for some considerable time, and does not give rise to any irritation of the skin. An ordinary starch paste is first made with cold water, and when sufficient boiling water has been added, to bring the paste to a proper consistency, the poultice is spread on a cloth and applied in the usual way.

Fomentations.—Reference has already been made to the effects of the application of hot cloths. A fomentation is prepared by soaking in boiling water a piece of flannel and then wringing it dry. If the fomentation is to act properly the drying must be thorough, and one of the most satisfactory methods of obtaining such a result is to pass the flannel through an ordinary clothes-wringer. As when first it is passed through much of the surface heat is lost by contact with the rollers, it is necessary to repeat the operation at least once. When placed on the skin, the usual precautions being taken in doing so, the fomentation should be covered with a piece of oiled silk a little larger than itself, cotton-wool or flannel placed on the top, and the whole fastened on with a handkerchief or bandage.

Sometimes a fomentation is required to produce a special effect, and a few drops of opium or some other drug are sprinkled on the wrung-out cloth. In such cases, however, the doctor will give his own instructions according to the effect he desires to produce.

Turpentine Stupes.—This is a particular form of fomentation in which turpentine is employed. It is prepared in the usual way, the turpentine

being sprinkled on the flannel after the excess of water has been removed. It is an excellent application in painful affections of a local kind, such as rheumatism of muscles or lumbago.

The Nurse.—The relatives of a patient are, for many reasons, apt to be less capable nurses than she who has been trained to the work. Her knowledge of what is necessary in the daily routine of the sick-room is in itself an enormous advantage, and her regular, systematic following out of the doctor's orders are submitted to by the patient in a manner that often astonishes his family by its docility. Were the treatment left to them, he would probably rebel. Another advantage is that the fluctuations of the patient's condition are not reflected in the countenance of the trained nurse as they would probably be in that of his wife or daughters. Doctors understand this and see with relief a trained nurse brought upon the scene. They recognize that the best chance of speedy convalescence is in this way secured. The fact that a nurse is in charge of the case does not prevent the showing of many little kindnesses to the patient, and a nurse who sees that such attentions give special pleasure to her charge will, when advisable, afford the relatives many facilities for so showing their affection and good-will.

It must be distinctly understood, however, that the nurse should have absolute control of the sick-room. Her services have been engaged on account of her experience; she cannot do her duty to herself, the doctor, her patient, or her employer if she is in any way interfered with. She takes her instructions from the doctor, and from him alone. A sensible nurse will always listen to and give full consideration to any suggestions offered by relatives or friends, but the adopting of these suggestions is a matter which lies between herself and the doctor.

Should a nurse be required, the doctor in attendance will probably be able to recommend one. If she has already taken charge of several of his cases, and thus understands his ways, she will be the better able to fulfil his wishes with regard to the treatment of her latest patient.

REMEDIES FOR SIMPLE AILMENTS.

Health is that condition of the body in which every organ is performing its physiological function properly. It is a condition characterized by an absence of pain or discomfort, and is the result of natural influences acting on the individual.

Life may be likened to a delicately-adjusted balance,—the one scale containing man himself, the other the forces which surround him. In perfect health the scales hang in equipoise, but that equipoise is never continuous, the scales are never exactly still. External influences are perpetually varying, and as they do so there is a corresponding movement in the other scale. So ceaseless is this movement, so regularly is the

equilibrium lost and regained, that perfect health is but a momentary reality. Provided, however, that these variations of equilibrium are moderate, the condition is still spoken of as one of health, for it would be inconvenient as well as absurd to describe every little alteration of the balance in any other terms.

At what point do these variations merge from health into disease? That no one can say; it is impossible to draw a line between the two. Suffice it for present purposes, that when the alteration of the balance becomes so marked that the condition cannot reasonably still be designated health, it is then customary to describe it as "disorder", and that when that alteration is yet more marked, and is attended by pain and suffering, the condition is spoken of as "disease".

So far the simile of the balance has illustrated three important facts: (1) that health is dependent on external influences; (2) that when these influences become unusual they lead to a disturbance of the normal state; and (3) that it is impossible to draw a definite line all variations above which are those of health and below those of illness.

But there is yet another lesson to be learned from the balance, the most important one of all, namely, that as at the turn of the scale it is often impossible to say whether the variation from equilibrium will be great or small, so when there is a disturbance of the vital processes—in other words, a variation from the condition of health—it is often impossible to say whether the body will regain its physiological equilibrium before passing from simple disorder into disease. No illness, therefore, no matter how simple, should be viewed too lightly; no one can afford to trifle with the slightest variation from a condition of health.

PATENT MEDICINES.—To dose oneself in order to avoid a doctor's bill is poor economy. An hour at the commencement of an illness is worth a fortnight afterwards, and the doctor's first fee promptly incurred may save a hundred later. And yet there are thousands who, before they will pay a half-crown to a doctor for advice, will spend a pound and often more upon some largely-advertised "cure-everything". In Great Britain alone over 5,000,000 pills are swallowed every day—in other words, one per week for each person in the population, an amount equal to a consumption of 170 tons per year.

There is a popular idea that the doctors' objection to patent medicines is based on jealousy, on a fear that they will lose their custom. Such an idea is erroneous. Their dislike is based on the broader grounds that, as the ingredients are kept a secret, they do not know what these medicines contain, and therefore cannot make themselves responsible for any undesirable effects which might be brought about by using them.

MASSAGE.—Though authorities have stated that it takes from four to five years' work to become a thoroughly first-class masseur, anyone, with a little practice, can perform the various movements sufficiently well to afford relief in many minor ailments. It is popularly supposed that bodily strength is the great secret of success in mastering the art. That, however,

is not so. The delicate clerk can become as good an amateur masseur as the athlete, the child of twelve or fourteen as the adult. Massage is made up of manipulations, the various movements being divided into four different varieties—effleurage, petrissage, friction, and tapotement.

Effleurage manipulations are of a stroking character, resembling the act of stroking a cat's back. The essential quality of this form of movement is lightness of touch. Such movements assist the flow of blood in the veins, and are chiefly used on the head, neck, and arms.

Petrissage consists of kneading and rolling movements, the object being to act upon the deeper muscles, vessels, and nerves. The movement has been likened to the gliding of the upper part of the index finger on the thumb in a rotary manner, with, at the same time, considerable pressure.

Friction movements are made by the finger-tips passing rapidly, in little circles, over the surface acted upon. They are soothing to the nerves.

Tapotement resembles the act of beating the fingers on a window-pane. On the head the movement is performed with the finger-tips; on the other parts of the body with the palm or outer border of the hand. The features of tapotement are rapidity and lightness, and its effect is to stimulate the nerves and muscles.

In massage manipulations one or other, or a combination of all four varieties, may be employed. Before starting, the skin should be smeared with a little cold cream to prevent abrasion. Briefly stated, the principal effects produced by massage movements are as follows:—

1. An increased supply of blood and a strengthening of the parts massaged;
2. A relieving of the congestion of internal organs;
3. A cultivation of muscles which are weak or poorly developed.

Acne (Blackheads).—Properly speaking, the two conditions are not identical, the former being an aggravated form of the latter. Blackheads are not little “worms”, as is popularly supposed, but are caused by a blocking-up of the pores of the skin by fatty material, the “blackhead” being simply dust which has stuck to the exposed part of the fatty collection. When the skin is in an irritable state the presence of these blackheads sets up little pimples, and when this takes place the condition is spoken of as acne. In the treatment the state of the skin as a whole demands attention, which is but another way of saying that the constitution is down. The diet should be plain and nourishing, while hot baths should be taken at night, cold ones in the morning, and if possible a Turkish one at least once every week. After the evening hot bath the skin, or such part of it as is affected, should be smeared with sulphur ointment, thoroughly worked in. Mere rubbing it on is not sufficient. With the working in massage movements may with advantage be combined, the skin thus being stimulated physically and medicinally at the same time.

Anæmia.—This is a condition characterized by extreme paleness, weakness, loss of appetite, and general lassitude. It is due to poverty of blood, and is chiefly prevalent among young girls. Want of open-air exercise,

costiveness, and the eating of dried rice, oatmeal, &c., are among the more common causes of the condition. In the treatment of anæmia iron in one form or other is essential, and care must be taken to see that the bowels are kept open. For children tea-spoonful doses of chemical food may be given, followed every other night by 5 to 10 grains of liquorice powder to counteract the tendency to constipation which the iron produces. Bland's pills may be recommended for young girls. With the pills 30 grains of liquorice powder should be taken every night, or a small wine-glassful of the compound decoction of aloes on alternate mornings. The diet should be nourishing, and if possible the greater part of each day should be spent in the open air.

Black Eye.—When the discoloration has started nothing is capable of arresting it, but if it is taken in time the application of cold water or acetate of lead lotion may at least have the effect of limiting the discoloured area. The homely application of a piece of raw steak is but the cold-water-cloth idea in another form.

Blackheads. See "Acne".

Bloodlessness. See "Anæmia".

Boils.—These are due to either a stout habit of body or a lowering of the system. It is not advisable to poultice boils. As a rule they will run their own course, and the best thing that can be done is simply to protect them from pressure. The general state of the health requires attention. The skin must be kept scrupulously clean, exercise must be taken in the open air, and milk, fresh vegetables, fresh fruit, chops, and steaks should form the greater portion of the diet.

Bronchitis.—In the general treatment of a case of bronchitis warmth and moisture play important parts. The temperature of the room must never be allowed to fall below 60° F. day or night. The air must be kept moist by means of some form of vaporizer. A few drops of terebene may with advantage be added to the kettle of water and thus inhaled with the steam. The chest and throat require rubbing with a tea-spoonful of turpentine every night, the parts being afterwards covered with cotton-wool to retain the heat. Hot poultices should be applied to the chest every hour until the cough is loose. The strength must be maintained by hot soups. A doctor should be sent for without delay, as not infrequently the bronchitis is associated with other troubles.

Bunions.—These swellings of the bursa over the joint of the toe are caused by the pressure of a too tight boot. Hot fomentations will relieve the pain, and further pressure must be avoided by the wearing of loose-fitting boots.

Catarrh. See "Cold in the Head".

Chapped Hands. For chapped hands or chapped skin, nothing is better than lanoline or its preparations, lano-creolin in particular.

Chilblains.—Sudden changes of temperature being the predisposing cause of chilblains, the circulation must be encouraged by wearing warm stockings and taking vigorous exercise in the open air even in the coldest

weather. The chilblains may be rubbed with the compound liniment of camphor. If caused by poverty of blood, cod-liver oil should be taken.

Cold in the Head.—This is the result of an inflammation of the lining membrane of the nose, the primary cause being as a rule damp or cold. An attack may often be arrested in its early stages by a hot bath or bathing the feet in hot water, and taking a powder composed of 10 grains of antipyrin and 3 grains of quinine mixed in milk. The dose should be repeated next morning. If necessary, the powder may be taken night and morning for the next two days.

Colic.—This painful affection of the bowels may proceed from a variety of causes—cold, improper food, lead poisoning, and so on. The pain is the most distressing symptom, and, until the arrival of the doctor, it may best be relieved by the application of hot turpentine stupes, and the administration of a dose of castor-oil.

Constipation.—Almost two out of every three cases of chronic constipation are due to carelessness in attending to the regular emptying of the bowels. Plenty of exercise assists in restoring their tone, and a dose of Tamar Indien or compound liquorice powder should be taken before retiring to rest, to assist their action. The diet must be attended to, brown bread, porridge, fresh vegetables, stewed or fresh fruits, raisins or roasted apples having a place in the daily menu.

Consumption.—Much may be done to limit the spread of this scourge of the human race. The health of those at all predisposed to the disease should be maintained at the highest level possible. They should spend all available time out-of-doors, and make a practice of invariably sleeping with bedroom windows open as well in the winter as in the summer. In the case of children, gymnastic training should be directed to strengthening the respiratory muscles and to increasing the chest capacity.

To prevent the spread of the disease by infection, consumptive persons should sleep alone, and the greatest care should be exercised in the proper disinfection and destruction of the sputum, for it is in it that the germs of the disease are contained. The only proper method of dealing with handkerchiefs which have been used for expectoration is to burn them at once, for it is only when the expectoration becomes dried that danger begins.

The treatment of the disease itself will be left to the doctor, who will choose a sunny room for his patient and will give directions for its ventilation and cleaning, which must be done without raising any dust. He will also control the amount of exercise and food to be taken.

Happily medical science has thrown much light upon this dreaded malady, and the mortality from it has greatly decreased in consequence.

Corns.—A corn is caused by the irritation of a tight boot or shoe, resulting in an increased growth of the skin at the point where the pinch is most severe, and the pressure of this growth upon a sensitive nerve gives rise to the accompanying pain. Cutting or paring, though it may give temporary relief, really only aggravates the mischief. Though slow, the treatment by proper corn plaster is ultimately the most satisfactory,

not only being painless, but generally effecting a cure in time. The plaster should be made from felt, and cut in the form of a horse-shoe, half an inch in width all round. When placed on the foot, the opening should look towards the heel. This admits of free circulation, which as a rule is impeded by the "ring" form of plaster. When paring a corn, it is always better to rub it with a little piece of soap a short time before commencing to cut. The soap has a softening action on the horny skin. Care must be taken not to cut too deeply, as wounds on the foot are slow to heal.

Cramp.—Cramp is caused by an involuntary or spasmodic contraction of the whole body or the muscles of certain parts thereof. Massage, especially petrissage movements, is the most convenient domestic remedy for this condition.

Croup.—Croup is an inflammation of the upper part of the windpipe, attended by hoarseness and difficulty of breathing. The general treatment consists in surrounding the child's cot with screens and covering it in with blankets supported by them. As in bronchitis, the air must be kept warm and moist by means of a vaporizer or bronchitis kettle, and a hot fomentation should be applied to the chest and throat. The special treatment of each individual case must be left to the doctor, who should be sent for without delay.

Deafness.—This is frequently caused by a collection of wax in the ear. Such a condition is in itself a simple matter, but if allowed to remain unattended to it may lead to injury and permanent deafness. The removal of wax from the ear by means of hair-pins, toothpicks, pencils, or other hard substances, is a practice which cannot be too strongly condemned, perforation of the drum of the ear being only one of the serious consequences which may follow. When it is necessary to clear the ear of wax, the process may easily be performed by means of warm water slowly introduced into the ear with a syringe. The usual glass syringes are not to be recommended, as in careless hands they may be employed with such force as to perforate the drum. A syphon tube arrangement is preferable in every way.

Diarrhœa.—An attack of diarrhœa may proceed from a variety of causes, and if it be prolonged, it proves most weakening. As a rule it is best first to clear out the bowels by a dose of castor-oil, so as to dislodge any undigested matter which may be proving a source of irritation; not infrequently the diarrhœa will afterwards cease. In other cases where the pain is the most pressing symptom, a lead and opium pill will often prove sufficient. Equal parts of brandy and port wine form a particularly successful "binder". If these simple methods have not the effect of terminating the attack, the patient should consult a doctor, as, apart from its weakening effects, diarrhœa is often but a symptom of some more serious condition.

Diphtheria.—This, which is by no means a "simple ailment", calls for the immediate attention of the doctor and the putting into use of the various methods of preventing infection.

Dyspepsia.—He who trifles with an attack of indigestion not infrequently pays for his folly by a life of misery. In the majority of instances the condition is at first preventable, the bolting of food, the drinking of too hot fluids, and tea-drinking at all hours of the day being among the causes which give rise to it. The acidity, heart-burn, and hiccough are all only so many danger-signals the meaning of which it is the doctor's province to discover. The immediate distressing symptoms may be relieved by hot turpentine stupes applied over the region of the stomach. A few drops of peppermint on sugar will assist in relieving the flatulence, and a pinch of bicarbonate of soda will help to counteract the acidity. The special treatment will depend on the cause from which the dyspepsia arises, and the habits, temperament, and constitution of the patient.

Earache.—Inflammation of the ear may be due to cold or to the results of fever. In simple cases the pain will be soothed by frequently dropping warm oil into the ear. Persistent earache demands the attention of the doctor.

Feet, Bad-smelling.—Badly-fitting boots and "firing" of the feet are the usual causes of this disagreeable condition. The feet should be washed thoroughly each night with carbolic soap and hot water. Thrice daily the heels and between the toes ought to be painted with some deodorizer, such as Condyl's fluid, and afterwards dusted with boracic acid.

Fevers.—The chief symptoms of fever are high temperature, dry skin, headache, more or less sore-throat, thirst, and restlessness. The condition may pass off in a few hours, or may be but the preliminary stage of some contagious disease. These contagious diseases are characterized by various eruptions, which make their appearance on certain days of the fever, according to the particular disease. Thus the eruption of—

Chicken-pox appears on the 1st		day of fever.
Scarlet fever	"	2nd "
Small-pox	"	3rd "
Measles	"	4th "
German measles	"	1st and 2nd "
Typhus fever	"	5th "
Typhoid or enteric fever	"	7th-8th "

During the period of waiting for the appearance of the eruption the diet should be light, and a 10-grain antipyrin powder may be given night and morning. The patient will, of course, be kept in bed, and the doctor summoned, while due precautions must be taken for the prevention of infection.

As the special treatment of each separate fever depends upon the condition of the particular patient, and the doctor will be in attendance to give his own instructions, it is unnecessary to refer to the various fevers in detail; but in the general management of fever cases as a whole certain points must be carefully attended to. The ventilation and temperature of the sick-room are important factors in the treatment. The former must be thorough, fresh air being constantly admitted, and the

latter must never fall below 60° F. The air must be kept clear by means of sprays of some disinfectant fluid, and the chamber must always contain some disinfectant solution. All bed and body clothes must be immediately steeped in a strong disinfectant solution, and all discharges should be disinfected at once. When the patient is sponged, a few drops of disinfectant may with advantage be poured into the water. Thirst may be relieved by home-made lemonade or barley water. It is almost unnecessary to mention the importance of absolute quietness and freedom from fuss.

Flat-foot.—In flat-foot the arch of the foot is lost through weakening of the ligaments of the ankle bones. By means of pads, special boots, and other forms of surgical appliances, the deformity may be considerably modified; but the matter is one which requires the attention of a skilful surgeon.

Flatulence. See "Dyspepsia".

Giddiness.—Attacks of giddiness may be due to a variety of causes, ranging from dyspepsia to defects of the eye. If the attacks be continuous or of frequent occurrence the attention of the doctor should be called to the condition. It is a frequent symptom in general anæmia, and in such cases wears off with improvement in the state of the blood.

Gumboil.—A gumboil is an abscess caused by the irritation of a decayed tooth, and attended by much swelling and pain. The "ripening" of the gumboil should be hastened by the application of toasted figs to the inside of the mouth. When it points it should be lanced, if it does not burst of its own accord, to allow the escape of the contents. The state of the general health should be looked after, and the strength maintained with strong soups, beef-tea, &c.

Hay Fever. See "Cold in the Head".

Headache.—A headache may proceed from many causes, some simple, others serious. If it is persistent, a doctor should be seen in order that the condition may be traced to its source and treated accordingly. A too lengthy interval between meals, sitting in a close and stuffy room, and prolonged mental work are all common causes. The morning headache may often be relieved by taking a biscuit last thing before retiring for the night, or a cup of hot tea or coffee the first thing on waking in the morning. Bathing the feet in hot water is invariably successful when the cause is an over-supply of blood to the head, and in a nervous headache a hot bath has usually a marked effect by soothing the whole nervous system. A tabloid of phenacetin may be taken twice a day. The state of the bowels must be attended to, the diet kept plain and nourishing, and regularity must be the key-note to the mode of life.

Heart-burn. See "Dyspepsia".

Hiccough.—Hiccough is due to a spasmodic action of the diaphragm, causing a sudden inspiration. A bottle of soda-water drunk before the gas has had time to escape is a simple and usually efficacious cure.

Hoarseness.—This may be the result of a slight exposure to cold, of the over-use of the voice, or a symptom of disease. A cold-water

compress worn round the throat at night helps to restore the tone, and a few chlorate of potass lozenges allowed to dissolve slowly in the mouth will be found useful.

Housemaid's Knee.—The pressure on the knee-cap occasioned by the kneeling position adopted in scrubbing floors and so forth frequently gives rise to swelling over the knee-joint. The swelling is more or less persistent, and though not particularly painful, it is uncomfortable and inconvenient. In most cases it will gradually disappear if painted with iodine; but a doctor should be consulted, as by improper interference there is always a risk of permanent injury.

Hysterics.—The treatment of hysteria is fully dealt with under the heading "Fits" in the section on "First Aid".

Influenza.—This is an aggravated form of catarrh supposed to be due to a micro-organism. The chief symptom is severe prostration. The patient should be given a hot bath and at once put to bed. A 10-grain antipyrin powder may be given in milk thrice a day. The possibilities of sudden serious developments must be borne in mind, and the doctor sent for at the commencement of the attack.

Insomnia. See "Sleeplessness".

Lumbago.—Lumbago is a rheumatic affection of the muscles of the loins. It is caused by the same conditions as give rise to rheumatism in general. The application of hot turpentine stupes, and rest in bed well wrapped up in blankets, will be found useful in most cases.

Mumps.—This is a swelling of the glands of the neck, due to a micro-organism, and more or less infective. At the commencement of the attack a good purgative, such as Gregory's powder, should be taken, and the patient kept in a warm well-ventilated room, the face wrapped up in cotton-wool.

Neuralgia.—There are various forms of neuralgia—neuralgia of the eye and orbit, neuralgia of the abdomen, neuralgia proceeding from dyspepsia, and the form of neuralgia known as tic-douloureux, to mention but a few varieties. The cause may be cold, damp, fatigue, poorness of blood, rheumatism, toothache, dyspepsia, &c. While the pain may be temporarily relieved by certain drugs, the condition itself cannot be cured without getting at and treating the real cause of it. The immediate distress may often be relieved by 5-10 grain doses of phenacetin. Rest, careful dieting—little meat, but plenty of milk—and massage are among the more important factors in permanent relief.

Night Sweats. See "Consumption".

Piles.—This exquisitely painful malady is due to damp—sitting on wet grass, for example—want of sufficient exercise, and so forth. The state of the bowels must be attended to, they must never be allowed to become constipated; and exercise in the open air must be taken in abundance. A little confection of senna taken at nights will assist the action of the bowels, and the piles may be smeared with gall-and-opium ointment. If the piles are of the bleeding variety, they should frequently be sponged or dabbed with a cloth wetted with a little of the tincture of hamamelis.

Pleurisy.—By pleurisy is meant an inflammation of the membrane covering the lungs. It is usually caused by exposure to cold or damp, and is characterized by fever and a sharp pain at every breath, the pain as a rule being confined to one side of the chest only. The condition is one calling for the immediate attention of the doctor. Until he comes the patient may be put to bed and wrapped up in warm blankets, hot bottles being placed at his feet, and hot fomentations applied to his chest.

Pneumonia.—Pneumonia, which may be accompanied by bronchitis, is an inflammation of the lungs, caused, like pleurisy, by exposure to cold or damp. Pneumonia may come on very suddenly, being ushered in with shivering, faintness, or vomiting, the patient's temperature sometimes rising to 105° F. within twenty-four hours. The necessity for sending at once for the doctor need not be dwelt on. Until he comes the treatment is similar to that for pleurisy—viz., bed, warm blankets, hot-water bottles, and hot fomentations applied to the chest.

Quinsy. See "Sore-throat".

Rheumatism.—Cold and damp are the primary causes of rheumatism, a disease the symptoms of which are too well known to require description here. In all rheumatic conditions the danger of the heart's becoming affected must be borne in mind. It is therefore advisable to consult the doctor whenever an attack of rheumatism comes on. The pain may be best relieved by hot turpentine stupes. Massage helps to improve the circulation and condition of the muscles and joints affected.

Rickets.—This disease is perfectly preventable, the causes which give rise to it being bad food, bad air, cold damp rooms, dirt, insufficient exercise, and want of sunlight. The earliest symptoms of the disease are profuse sweating of the head and neck, especially during sleep, a protuberant belly, and a general feeling of tenderness all over. The ends of the long bones in the legs and arms gradually enlarge, producing swellings at the ankles and the wrists, and little lumps form where the ribs join the breast-bone. The bones of the whole body are soft and bend with the least pressure. Proper hygienic surroundings and nutritious food form the basis of the treatment for this condition. Raw-meat juice, cream, fish, cod-liver oil, milk, or malt and cod-liver oil are all beneficial. Rickety children are liable to bronchitis or diarrhoea, and in that case their condition is dangerous in the extreme.

Ringworm.—Ringworm is not caused by a worm, but by a species of vegetable fungus. It is a highly contagious condition, usually attacking the head. It is communicated by the towels, brushes, or caps of other infected patients, or, it may be, by direct contact. Commencing as a little round red patch, it gradually spreads, fading somewhat in the centre as it does so. In ringworm of the head the hairs break off near the surface of the skin, leaving a nearly bald patch, with short hairs sticking up like brushwood. The doctor will prescribe some form of ointment, which must be thoroughly rubbed in, and the patient must use a separate brush and towel.

Sciatica.—Sciatica is but a form of neuralgia, the sciatic nerve being the part affected. The directions given for the treatment of neuralgia in general

will hold good in the case of sciatica in particular. Massage must be freely indulged in, warm fomentations applied, and gentle exercise taken in the open air.

Sleeplessness.—In itself the simplest ailment, sleeplessness is perhaps the cause of more accidental deaths than all other forms of illness put together. The habit of taking sleeping draughts, when once commenced, is not readily shaken off, and the ease with which an overdose may unwittingly be swallowed, or another bottle lifted by mistake, is a matter of serious moment. Before even temporary recourse is had to drugs all the common-sense remedies should be tried. It is surprising how many cases of insomnia may be relieved by simple means. An empty stomach is responsible for a fair proportion of such cases, and a couple of biscuits taken last thing before retiring for the night is often all that is required to secure a good night's rest. For those who fall asleep on retiring to bed, but waken up at a certain hour and cannot sleep again, a warm bath, a cup of hot milk, hot whisky-toddy, or even a tumblerful of very hot water, taken at bed-time, will frequently be sufficient to prolong the duration of sleep. Where worry, study, or anxious thinking is the cause, a hot bath will do much to promote sleep by its soothing influence on the whole nervous system.

Sore-throat.—In popular language this may mean anything from a slight feeling of soreness to complete loss of voice. It may take the form of "clergyman's sore-throat", in which the voice at first becomes hoarse and afterwards may be reduced to a whisper; it may be the sore-throat due to the irritation of a relaxed uvula; or it may be the sore-throat of enlarged tonsils or "quinsy". The first form is usually due to over-use of the voice, but all three may be caused by bad drainage, or by cold or damp, as, for example, leaving a warm room and going out into the cold or moist air too suddenly. In "clergyman's throat" rest is, obviously, the first essential feature of the treatment. Cold compresses should be worn round the throat, and chlorate of potass or menthol lozenges sucked at intervals. In the other varieties of sore-throat the treatment should commence with a purgative, such as a colocynth pill, followed by cold compresses, to which a few drops of turpentine have been added, worn round the throat. The uvula and back of the throat may be painted with glycerine and tannic acid. In quinsy the swelling of the tonsils may necessitate steps being taken for the outlet of the pus which has formed. It remains to be added that the tonsils and uvula may be enlarged. In such a case the patient will be frequently troubled with soreness of the throat and more or less loss of voice. Medicinal treatment is not of much avail here; it is best to have the enlarged tonsil or uvula snipped off by the surgeon. The operation is painless, and the benefit more than counterbalances any temporary inconvenience.

Stye.—A stye is an inflammation of the root of an eyelash, and may be caused by cold or general lowness of the system. The early application of a cold compress may nip the formation in the bud; otherwise hot water will relieve the pain and hasten the suppurative stage. The general health must

be looked after, nourishing food taken, and open-air exercise indulged in freely. A mild purgative may be given with advantage.

Tic-Douloureux. See "Neuralgia".

Toe-nail, Ingrown.—This extremely painful condition is caused by an ingrowth of the margins of the nail of the great toe. The pressure of the nail sets up irritation of the flesh, in which it becomes embedded, and this irritation may go on to ulceration, the pain being such as to prohibit the patient putting his foot to the ground. By care and the exercise of much patience, the condition may be cured without having recourse to the extreme measure of removing the entire nail; but the process is a tedious one, requiring great perseverance. By gradually raising the nail from its bed and keeping it so raised by packing a pledget of cotton-wool beneath its edge, the immediate pain will be slightly relieved. The sides of the nail may be touched with a solution of tannin, and the whole nail rubbed with pumice-stone. The state of the surrounding flesh will enable the doctor to decide as to the most suitable form of treatment. If the pain is severe, or if the patient cannot afford the time for so tedious a cure, it is better to have the whole nail removed at once. A tendency to ingrown toe-nail may often be checked by attention to the way in which the nail is cut when trimmed. Whatever style may be adopted in the case of the fingers, toe-nails should be cut straight across, and on no account rounded or trimmed at the sides.

Toe, Twisted.—It sometimes happens that one or other, but generally the middle one of the toes, gradually grows downwards between its neighbours until they begin to overlap it. In other cases it is the great toe which is twisted, the direction taken being outwards. It may lie either above or below its neighbour, and the deflection, which is often produced by a bunion, is a common cause of ingrown toe-nail. Both these conditions are troublesome, and the process of treatment is slow. By special forms of glove-like stockings the toes can be gradually worked back to their normal position, but the condition is one for the surgeon. The wearing of tight boots aggravates, if it does not give rise to, an unnatural form of the foot. In all such cases, therefore, large, roomy boots or shoes are an important factor both in prevention and in cure.

Tongue-tie.—In infants the tongue is occasionally found to be "tied" to the floor of the mouth by a band of membrane on its under surface. In the majority of such cases the surgeon is able to release the "unruly member" merely by severing it with his finger-nail. In more severe cases a snip with a pair of blunt scissors is all that is required.

Tonsillitis. See "Sore-throat".

Toothache.—The causes and symptoms of toothache are too well known to require description here. If the aching tooth presents a cavity, nothing answers better than placing in that cavity a pledget of cotton-wool soaked with the oil of cloves. Should the tooth be comparatively whole and the pain diffused, three 5-10 grain powders of phenacetin may be taken, one every hour.

Varicose Veins.—This is a condition of enlargement and swelling of the veins of the leg, sometimes caused by prolonged standing or being much on the feet. Apart from its discomfort it is attended with some amount of danger, owing to the tendency of the veins to burst (see "Arrest of Bleeding" in "First Aid"). The treatment consists in supporting the veins by means of properly-fitting elastic stockings, resting the legs as much as possible, and assisting the flow of blood by placing them on another chair when sitting. Any tendency to costiveness must be avoided, and venous congestion relieved by an occasional dose of Glauber's salt. Exercise should be taken, though in moderation, and the general health attended to.

Warts.—If left alone warts will often disappear of their own accord. Wetting the growth and touching it with lunar caustic facilitates matters, but has the disadvantage of darkening the wart and making it more apparent. The caustic is, however, a dangerous thing to handle, and must be used with care.

Whitlow.—A whitlow is an acute inflammation of the finger or thumb. It is attended by intense pain, and if neglected may involve the bone itself. As a rule it goes on to suppuration and requires to be opened. Domestic interference is inadvisable; the doctor should be consulted at the first.

Whooping-cough.—This is a very infectious disease, which begins at first as an ordinary cough, the "whoop" not coming on till, it may be, two or three weeks later. According to the severity of the attack, each fit of coughing may, or may not, be attended with vomiting or bleeding from the nose. Warmth and fresh air are the two chief points in the treatment. Unless the patient spends the day in the bedroom, it should be thoroughly disinfected each morning by burning sulphur in it, the windows being left open all the afternoon and a fire lighted early in the evening. The diet should be easy of digestion, and the amount of fluid somewhat limited. The duration of the disease is variable, and great care must be taken not to catch cold, as the condition is one which predisposes to bronchitis, inflammation of the lungs, and consumption.

Worms.—The chief symptoms of worms are grinding of the teeth, picking of the nose, capricious appetite, and disturbance of the bowels. There are three varieties of worms which infest the human system.

A tape-worm is a flat segmental worm, the head of which must be passed, otherwise the parasite will continue to grow. For an adult one dessert-spoonful of turpentine may be given in milk, preceded by about an hour by a dose of castor-oil.

Round-worms are somewhat similar to the ordinary earth-worm, and are occasionally vomited through the mouth. From one to six grains of *santonin*, according to age, should be given at night, and followed in the morning by castor-oil.

Thread-worms, which are about three-quarters of an inch long, inhabit the lower end of the bowel. An injection of salt and water (a tea-spoonful to a pint) is usually effective in killing them.

POISONS.

In the treatment of poisoning the golden rule is to seize on the first remedy which can be found. An antidote at hand is of more value than a better one in another room. In short, to quote the advice which professors in the medical schools never fail to impress upon the students: "Remember that the nearest remedy is the best remedy".

Some cases of poisoning are hopeless, while in others, which seem to be progressing favourably, secondary symptoms may suddenly supervene and carry the patient off. It is imperative, therefore, to send immediately for a doctor, and the treatment given here is only such as can with safety be applied until he comes.

Poisonous substances are divided into two classes—irritant poisons and general poisons. The symptoms of each class are different, those of the general poisons presenting much greater variety than those of the irritant or corrosive ones.

Irritant or Corrosive Poisons: Symptoms and Treatment.—For the sake of brevity poisons of this class may be grouped together. Generally speaking, the only difference between the two varieties is the greater intensity of the symptoms of the corrosives.

When a poison of the irritant group has been taken, the first indication of the fact is a sensation of burning in the mouth and throat, closely followed by heart-burn of a severe type. As the poison reaches the stomach the pain in the abdominal regions grows more and more intense, the belly becomes swollen, and the legs are drawn up in a frantic effort to relieve the strain. Vomiting is an almost invariable symptom. It is nature's effort to expel the poison from the system; and, as nature never errs, the treatment should be based on the lines which she indicates, and directed to the encouraging of the process of vomiting by giving emetics, such as warm water, mustard and water, or sulphate of zinc (10 to 30 grains).

But the mere evacuation of the contents of the stomach is not all that is required. Though much of the poisonous substance may have been removed by this means, a certain, and in all probability the greater, part will have been absorbed into the system, and the treatment must also be directed towards the alleviation of the symptoms which this will bring about. The whites of raw eggs beaten up in milk are not only readily obtainable, but form the best mixture which could be given. It has the additional advantage of being one which is equally serviceable in all cases of irritant or corrosive poisoning.

If the dose of poison is a large one, the patient will more or less rapidly pass into a condition of collapse, and it may be advisable, if not absolutely necessary, to set up artificial respiration. (Full directions for doing so will be found under "Drowning", see p. 86.)

As already indicated, the corrosive poisons differ from those of an irritant nature in the greater intensity of their symptoms. Not only do

they act as poisons in the sense of that word as applied to the irritants, but they corrode or char every part of the mouth, throat, and stomach with which they come in contact. Attempts to set up vomiting must on no account be made when the mouth or throat present any such appearances of charring, for the action of vomiting would merely further irritate the damaged membranes. The treatment in such cases must be confined to antidotes and demulcent mixtures, such as are indicated in the table below.

General Poisons.—In the case of general poisons there is much more variety in the symptoms. Several poisons of this class produce characteristic results, and while the effects of the irritant poisons have so much in common that it is difficult to say off-hand, from symptoms only, which of them has been employed, the symptoms of the majority of the general or miscellaneous poisons are so distinctive that little more than a glance at the patient is sufficient to indicate which one of them has been taken.

General Treatment for Poisoning.—When a person exclaims that he is poisoned, and there is no immediate evidence to show what he is poisoned with, the first thing to do is to glance at the mouth and note if there are traces of charring. If not, an emetic should at once be administered, followed shortly by a draught composed of the whites of raw eggs beaten up in milk or oil (salad oil, for example).

Special Treatment.—If, on the other hand, the nature of the poison is known, the treatment should be directed towards the antagonizing of the effects of the poison by what are known as “antidotes”.

In the following table it will be observed that several drugs appear both as corrosives and as irritants. The reason is that these drugs are corrosive in action when strong, and merely irritant in weak solutions. If sulphate of zinc is not at hand, vomiting may be produced by mustard and water, salt and water, even warm water alone. The zinc, however, is the most rapid in action.

POISONS.	SYMPTOMS	TREATMENT.
CORROSIVES.		
Carbolic Acid Hydrochloric Acid (strong) Nitric Acid (strong) ... Sulphuric Acid (strong)	Charring of mouth and throat, with burning pains in same; heart-burn; vomiting shreds of skin	For carbolic acid, a table-spoonful of Epsom salts in a tumbler of warm water is best. Baking or washing soda, or chalk or lime, or magnesia, all diluted with water, or large drinks of soap and water, or lime-water. Milk or olive-oil should be given later, either alone or with whites of raw eggs
IRRITANTS.		
Acids (weak Nitric, Oxalic, and weak Sulphuric) Arsenic Antimony (Tartar Emetic)	Burning pains in mouth and throat; heart-burn; bellys swollen; legs drawn up; vomiting Burning pains in mouth and throat; heart-burn; bellys swollen; legs drawn up; vomiting	20 grains of sulphate of zinc to be given in warm water to promote vomiting; magnesia in unlimited quantity, and whites of raw eggs beaten up in milk 20 grains of sulphate of zinc in warm water to promote vomiting. Follow with whites of raw eggs beaten up in milk. Then strong tea or coffee

POISONS.	SYMPTOMS.	TREATMENT.
CORROSIVES.		
Caustic Potash.....	Burning pains in mouth and throat; heart-burn; belly swollen; legs drawn up; vomiting	Vinegar and water. Later, whites of raw eggs beaten up in milk
Caustic Soda.....		
Caustic Ammonia.....		
Phosphorus.....	Burning pains in mouth and throat; heart-burn; belly swollen; legs drawn up; vomiting	20 grains of sulphate of zinc in warm water to promote vomiting. Follow with magnesia in barley-water or white of raw egg. Be careful to avoid giving oil, as the phosphorus is soluble in oil and thus more easily absorbed
Nitrate of Silver.....	Burning pains in mouth and throat; heart-burn; belly swollen; legs drawn up; vomiting	Strong solution of salt and water frequently repeated. Follow with white of raw egg and milk
GENERAL POISONS.		
Alcohol.....	Period of excitement, followed by drowsiness	20 grains of sulphate of zinc in warm water to promote vomiting. Follow with strong tea or coffee. In extreme cases, artificial respiration
Belladonna.....	Skin dry; great thirst and restlessness	20 grains of sulphate of zinc in warm water to promote vomiting. This may be followed with alcohol, or strong tea or coffee. Throw cold water on face and head. Artificial respiration should be started in severe cases
Chloral.....	Great drowsiness; breathing feeble; skin clammy and cold	Treatment of chloral same as opium, but do not walk patient about; give stimulants, and wrap in hot blankets
Croton Oil.....	Symptoms similar to those of irritant poisons	20 grains of sulphate of zinc in warm water to produce vomiting. Barley-water to be drunk freely
Ether. See Alcohol.
Laudanum. See Opium.
Mineral Oils (Kerosene, Paraffin, Petroleum, &c.). See Alcohol.
Morphia. See Opium.
Opium.....	Great drowsiness; breathing feeble; skin clammy and cold	20 grains of sulphate of zinc in warm water to promote vomiting. Repeat frequently. Strong tea or coffee. Keep patient awake at any cost. Walk him about to keep him from sleeping. If necessary, start artificial respiration
Poisonous Foods (Tinned meats, bad fish, &c.).....	Symptoms similar to those of irritant poisons, but milder	20 grains of sulphate of zinc in warm water to produce vomiting. Follow with a full dose of castor-oil to clear bowels
Poisonous Plants (Berries and Fungi).	Symptoms similar to those of irritant poisons, but milder	20 grains of sulphate of zinc in warm water to produce vomiting. Follow with whites of raw eggs beaten up in milk or salad-oil
Prussic Acid.....	Difficult breathing, followed by convulsions	20 grains of sulphate of zinc in warm water to promote vomiting. Strong ammonia to be inhaled, alternate douches of hot and cold water to be applied, and brandy to be swallowed—all with the object of stimulating the respiration. Artificial respiration commenced if necessary
Strychnine.....	Restlessness, followed by spasms	20 grains of sulphate of zinc in warm water to promote vomiting. Keep patient as quiet as possible until doctor comes. Artificial respiration when necessary

Alcohol.—To include alcohol among a list of poisons may seem to savour of the temperance platform; but leaving temperance principles out of



the question altogether, the fact remains that, in an overdose, alcohol is as much a poison as arsenic, strychnine, or any other toxic drug. The symptoms of drunkenness are sufficiently well known to require no description here; but it must be borne in mind that when those symptoms have developed into a stage of insensibility, and the condition becomes one which may be confounded with apoplexy or any other serious illness, the question is not, "Is the patient drunk or dying?" but, "How can a fatal termination be averted?" The symptoms of poisoning by alcohol, ether, or mineral oils are, a period of excitement, succeeded by drowsiness more or less severe. The effects of ether poisoning pass off much more rapidly than do those of alcohol. The mineral oils usually set up vomiting, and thus are quickly eliminated from the stomach.

Opium.—When taken in poisonous doses, opium, and the various preparations of that drug, produce symptoms closely resembling those of chloral. Poisoning by both drugs through inadvertence is common, and in each case the respiratory system is the one which suffers most. The breathing is slow and feeble, the skin is cold and clammy, and the patient is drowsy in the extreme.

Belladonna.—The symptoms of poisoning by belladonna, or the "deadly nightshade", are almost the exact converse of those caused by chloral or the opium preparations. The skin is dry and sometimes covered with a scarlet rash, and there is intense thirst and well-marked restlessness.

Prussic Acid.—This is so poisonous a drug that death is almost invariably instantaneous. Even when a weak dose has been taken the symptoms come on rapidly, and of these the earliest and most prominent is difficulty of breathing. Convulsive movements, beginning almost immediately, are followed by a period of calm, ending more or less rapidly in death. In a word, the symptoms resemble those of choking. The treatment should be directed to the maintaining of life by artificial respiration, and douching the head and spine with cold water.

Strychnine.—Strychnine poisoning cannot be mistaken. Soon after the drug has been swallowed there is intense restlessness, succeeded quickly by trembling, which in turn is followed by general muscular spasms, or, if for the sake of clearness an Irishism may be allowed, "lock-jaw" of the whole body. In a few moments the spasms pass off and there is a period of rest, which, however, is soon succeeded by another spasm.

Croton Oil.—The medical dose of croton oil is so small, and the drug itself so powerful, that unless the greatest care is taken poisonous effects are produced by its administration. Its symptoms are severe purgation and the burning sensations of irritant poisons. The poisonous effects of this drug are strikingly illustrated by a story which is told of a certain professor, who, when examining his class, asked the dose of croton oil. "Three minims," said a student sitting in one of the front benches. The professor made no observation on the answer, and continued putting other questions to his class. Five minutes later, at the close of the examination, the student stood up and said, "Permit me, professor, to change my answer."

I ought to have said one minim." "You are too late, sir," replied the professor; "your patient died four minutes since."

"FIRST AID".

Before attempting to repair a watch which has suddenly stopped it is advisable to have some idea of the mechanism by which that watch is worked; so before attempting to treat an accident to the human body it is essential to understand in a general way the manner in which that body is built, and how life in it is maintained.

Anatomical Relations.—The skeleton, or bony framework of the body, is divided into three parts: (1) the head, (2) the trunk, (3) the limbs.

1. The head consists of the skull-cap and the face. The former, composed of 8 bones, forms a cavity which contains the brain. The face is made up of 14 bones, the lower jaw-bone being the only one which is movable and the one most liable to fracture.

2. The trunk is divisible into three subdivisions: the spine, the ribs, and the pelvis. The spine, or backbone, made up of a number of separate bones placed one on top of the other, supports the head, trunk, and upper limbs. Throughout its entire length runs a narrow canal containing the spinal cord or "tail of the brain". It is through this "tail" that impressions are conveyed from the brain to the various muscles, and *vice versa*; hence the seriousness of a fracture of the spine and the danger of injuring the spinal cord by moving the patient. The 8th to the 19th bones of the spine (inclusive) are attached to the ribs, long thin semicircular bones, of which the upper seven are attached in front to the breast-bone. Backbone, ribs, and breast-bone together form the thorax or chest, which contains the heart and lungs. The pelvis is a hollow basin-like bone, really made up of several, which forms a firm basis for the trunk and serves to connect it with the lower extremities.

3 The upper limb is composed of the collar-bone, the shoulder-blade, the arm-bone or humerus, the two forearm-bones, and the small bones of the wrist and hand. The lower limb consists of the thigh-bone or femur, the knee-cap, the two bones of the leg, and the small bones of the ankle and foot.

The various bones are attached together by means of joints, and are covered with muscles whose function it is to perform the varied movements. Throughout these muscles run blood-vessels conveying the blood to and from the heart, and nerves conveying impressions to and from the brain.

Physiological Functions.—The leading physiological functions of the body may best be described by stating briefly what happens to an ordinary meal from the moment that it enters the mouth. An average diet is composed of four forms of food-stuffs:

Nitrogenous foods, or proteids, such as meat, eggs, and cheese.

Hydro-carbons or fats—cream, butter, &c.

Carbohydrates or starches—sugar, potatoes, &c.

Inorganic or mineral foods—salt, phosphates, iron, &c.

In the mouth the food is broken up by the teeth and moistened by the saliva or spittle. By the act of swallowing it is passed into the gullet, down which it is conveyed to the stomach. Here the food is churned for some time, the proteids being dissolved and transformed into "peptones", and the whole mixture is gradually forced into the intestines. In the intestines it is subjected to the action of several juices, is broken up into very fine particles, the whole looking like an emulsion, and is then absorbed into the blood, the proteids, starches, and minerals directly, the fats through the medium of the lacteals and thoracic duct. By the action of the various glands through which they pass these various food-stuffs are transformed into blood, which in its turn feeds the actual cells or fibres of the various tissues. The function of the blood is therefore to convey the products of food to every corner of the body. But it has another function besides this. In order to carry on their various actions the muscles and organs of the body must be supplied with oxygen. This oxygen is obtained from the air, from which it is absorbed by the blood-corpuscles as they pass through the lungs, and by them is conveyed to every part of the body. Now, in order to keep the blood circulating through the system some motor-power is necessary, and it is supplied by the heart. With every beat the heart sends out some 5 or 6 ounces of blood which has just been oxygenated in the lungs, and this rich red blood is sent jerking along the arteries throughout the body. After having given up its oxygen it comes slowly back to the lungs and heart through the veins.

In exchange for oxygen it receives carbonic acid, a gas which is formed by the action of the tissues, as soot is formed by the burning of wood or coal. As the blood passes through the lungs it gives up this carbonic acid, and in exchange receives a fresh supply of oxygen. When the lungs cease to act, as in a case of drowning, the blood becomes unable to supply the various tissues with the oxygen which they require, and the heart, itself a muscular organ, being thus deprived of its necessary means of support, gradually grows weaker, and finally stops beating. The absolute dependence of the various systems one on the other is seen in the case of each and all. In the section on "Simple Ailments" reference was frequently made to the importance of strict attention to the state of the bowels. The reason will now be plain. When the bowels are blocked up or constipated, they cannot properly perform their part in the digestion of the food; the quality of material poured into the blood is therefore inferior, and as a consequence the whole body suffers in a greater or less degree.

In the following pages reference is made to the more common accidents which are liable to occur even in the best-regulated families. It must be understood distinctly, however, that such treatment as is given is only intended to afford immediate relief to the sufferer. It is not intended as

a substitute for the doctor, who, in almost every case, should be sent for without delay.

The Arrest of Bleeding.—Poisoning, drowning, suffocation, and bleeding are the four forms of emergency in which the patient's life depends on the promptitude with which he is treated. Of the four, bleeding is perhaps the one in which the patient runs the greatest risk of improper treatment, for the sight of blood makes not a few of even the most willing helpers lose their heads. In the description of the anatomical relations and physiological functions of the body reference was made to the general properties of the blood, and the plan of its circulation. It will be remembered that the heart forces the blood to all parts of the body through the arteries, and that from all parts it is returned to the heart through the veins. Blood from a wounded artery squirts out in jerks, and is bright red in colour; that from a wounded vein flows in a steady purple stream. Arterial and venous blood may therefore readily be distinguished one from the other.

In the case of an artery, pressure is applied to the edge of the cut nearest the heart; in the case of a vein, to the edge farthest from the heart. Pressure of the blood-vessel against the bone will alone stop bleeding from any part of the surface of the body, and though whenever such pressure is removed the bleeding may recommence, it may by such means be temporarily arrested for an indefinite period. It is quite a common occurrence for a nurse attending some case in the country so to arrest otherwise fatal bleeding for from three to four hours.

If other means of pressure are at hand, they may with advantage be substituted for pressure by the fingers. At the place where the circulation is to be controlled so as to arrest the bleeding, a tourniquet, consisting of a long rubber tube, which passes through a block of hard wood (fig. 567), is wound tightly round the limb. A channel is cut in the block of such a size that the india-rubber can pass into it only when it is well stretched, and it prevents the band from slipping when the stretching force is removed. The disadvantage of the tube is, that the flow not only through the bleeding vessel, but also through every vessel of the limb, is stopped. The tube cannot, therefore, be kept on very long, on account of the danger of mortification setting in.

A piece of wood, a coin, or a pebble, enclosed in the centre of a folded scarf, may be used as an improvised tourniquet (fig. 568). The pad is

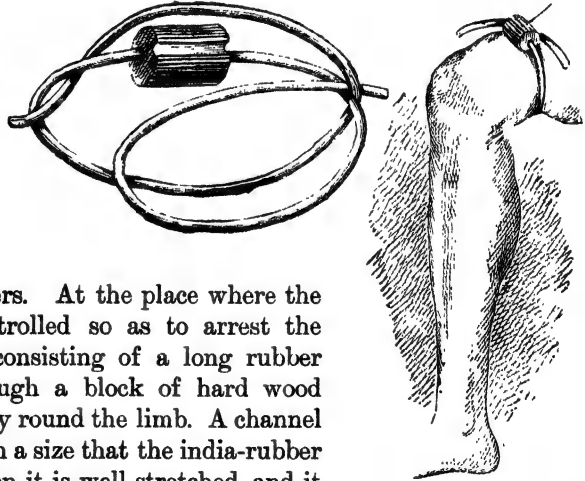


Fig. 567. — Tourniquet of India-rubber and same applied to the Leg.

placed upon the main blood-vessel of the bleeding limb, the ends of the scarf being tied on the opposite side of the limb. Between the knot and the flesh a small stick is inserted and gradually twisted round. The pad is thus pressed on the blood-vessel, and the circulation through it stopped.

Bleeding from the Nose.—This may be allowed to stop of its own accord if not too severe or long-continued. Bleeding from the nose is often nature's means of relieving congested blood-vessels, and thus warding off some more serious trouble, such, for example, as apoplexy. In these cases, as soon as the congestion is relieved the bleeding ceases. The arrest of bleeding from the nose may be a most simple process, or one of the most difficult. In ordinary cases, however, the erect position, with the head held high and the arms raised above it, is generally sufficiently effective. All clothing about the throat should be loosened to allow of free circulation, and a key or cold-water compress applied to the nape of the neck. The nose must not be blown nor cleared. If these means are unsuccessful, some alum (a tea-spoonful to a cup of cold water) may be sniffed up the nostril, or a strip of lint may be pushed into the nostril by means of a pen-holder.

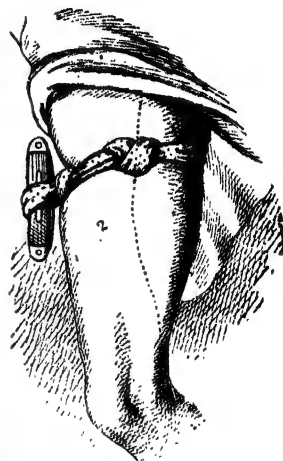


Fig. 568. — Arrest of Bleeding from Foot or Leg by knotted handkerchief twisted by means of a pocket knife, the knot pressing in the proper place.

Ruptured Varicose Veins.—This is an emergency calling specially for promptness in treatment. For a description of varicose veins the reader is referred to the section on "Simple Ailments", the sudden bursting of these veins being all that is dealt with here. In walking along the street or elsewhere the patient faints and falls, and a stream of blood is seen to be flowing down his leg. All the immediate treatment necessary is to let him lie full-length (if in the street, until a conveyance is ready to convey him either to a hospital or to his home), with the bleeding leg raised, and a handkerchief tied tightly round it over the bleeding point, so that pressure is made both above and below it.

Wounds of Lips.—In the case of wounds of the lips the general rule for stopping bleeding—pressure against an underlying bone—cannot be applied, as there is no bone to press against. The bleeding, however, can be stopped by inserting one or more fingers inside the lips, and thus pressing against the thumb which is held outside.

Simple Cut.—The only treatment necessary for a simple cut is to apply a small piece of lint wetted with cold water, or two narrow strips of court-plaster placed across the wound.

Fractures.—The great point to remember in the immediate treatment of a fracture is to keep the injured limb at perfect rest. The assistance of ill-advised friends or onlookers has transformed many thousands of simple

fractures, in which the bone was merely snapped across, into compound ones in which the broken ends of the bone have torn the surrounding muscles, and have been driven through the skin. The most efficient method of keeping a fractured limb completely still is to support it by means of splints

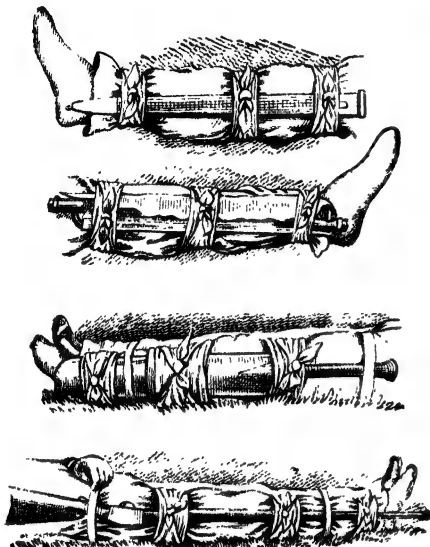


Fig. 569.—Temporary Splints applied for Fracture of Bones of the Leg.

manner in which the more common varieties of fracture are treated.

Jaw, Fractured Lower.—In such an injury, which is caused by a blow or some form of direct violence, all that is required is to support the injured jaw against the upper one by a handkerchief laid under the chin and tied on the crown of the head (fig. 570).



Fig. 570.—Bandages for fractured Lower Jaw.

Collar-bone, Fractured.—When a person slips, the instinct of self-preservation asserts itself, and the hand is outstretched to lessen the fall. Frequently as a result the collar-bone is broken. The shoulder droops, and the patient keeps it up by supporting the elbow of the injured side with the opposite hand. This position, instinctively taken, suggests the method of bandaging (fig. 571). A pad consisting of paper, or a cap, or anything else convenient, is put in the arm-pit to keep the broken ends from overlapping; the elbow is placed to the side and

the forearm crossed over the chest, the hand being higher than the elbow. The elbow is supported and the hand held in position by a scarf or towel, the ends of which are fastened at the opposite shoulder, one having passed over the chest and one over the back. The arm, elbow,

fastened round it by bandages. But splints and bandages are not always to be laid hold of at a moment's notice, and the best "first-aid" is he who can most readily adapt such things as are within his reach to the necessities of the case. An umbrella, a walking-stick, or a newspaper folded several times, are as serviceable temporary splints as the most approved form used in hospital, and handkerchiefs, scarfs, and even neck-ties are quite as efficient temporary bandages. It is not advisable to remove the clothing unless there is bleeding, in which case steps must be taken to arrest it. The mode of applying support will, naturally, vary according to the form and position of the injury. The following particulars will enable the reader to learn the

and hand are then securely fixed to the body by a similar scarf brought round the elbow and fastened near the opposite arm-pit.

Shoulder-joint, Fractures round the.—For a fracture near the shoulder-joint all that can be done on the spot is to fix the arm to the body by a sling.

Elbow-joint, Fractures near the.—These are usually complicated injuries, and the less done to them by others than the surgeon the better. The forearm should be supported in a sling.

Humerus, Fractured.—Intense pain is usually associated with a fracture of the humerus. The displacement is often considerable, and the bones have a tendency to overlap. Improvised splints are placed round the outer and inner sides of the arm, care being taken that the splint on the inner side does not catch when the elbow is bent, otherwise the artery will be compressed and the circulation interfered with. In applying the bandages by which the splints are held in position, the seat of the fracture must be avoided, the bandages being placed above and below it. If the hand and wrist are then rested in a sling, all that is necessary will have been done.



Fig. 571.—Temporary Treatment of fractured Collar-bone.

Forearm, Fractured.—The injured arm should be protected by splints extending from the elbow to beyond the finger-tips. As in fracture of the humerus, care must be taken that the splint on the inner side does not press upon the artery at the elbow-joint when the arm is bent. In putting on the splints the hand should be placed in position with the thumb pointing upwards, and the actual seat of injury avoided by the bandages. A broad sling should be made to support the arm.

Ribs, Fractured.—In an accident of this kind, the patient complains of a catch in the breath or a stitch in the side at every inspiration. By placing the hands on the side of the chest wall and pressing firmly this pain is relieved, as the patient usually finds out for himself. A bandage or scarf tied tightly round the chest, thus supplanting the hand pressure, is all that need be done in the first instance.

Spine, Fractured.—A fractured spine is so serious an accident in itself, and so certain to produce the most disastrous effects if injudiciously interfered with, that the wisest course to pursue is to let the patient lie flat upon his back until skilled assistance can be obtained. Any attempt at bandaging is, of course, out of the question.

Thigh, Fractured.—From the weight of the leg and mobility of the limb, a broken thigh is one of those fractures which can very easily be transformed from a simple to a compound one. In a case of this kind

what is required is a support which will keep the limb and the whole side of the body perfectly rigid. A long enough support is often difficult to obtain, but it is better to leave the patient alone and go in search of something sufficiently long, than to attempt to fix up the limb inefficiently. The support is placed along the injured limb, going right up into the armpit and extending beyond the foot. On the inner side of the fractured leg an umbrella or walking-stick should be placed, and a twice or thrice folded newspaper put behind the limb. These improvised splints should then be fastened to the leg with handkerchiefs, the long splint being secured to the body by scarfs passed round the chest and abdomen. When all these bandages have been securely applied, additional rigidity is obtained by bandaging the two legs together. The patient is then in a position to be lifted gently on to a stretcher and conveyed elsewhere.

Knee-cap, Fractured.—This may arise from the most simple slip. The point to be borne in mind in treating such an accident is to keep the two halves of the broken bone as close to one another as possible. A broad splint placed behind the knee, and running from the thigh to the ankle, answers the purpose, and is all that can be done.

Leg, Fractured.—The bones of the leg are so thinly protected in front that in such a fracture it is not unusual to have the broken ends forced through the skin. The simplest and safest immediate treatment is to lay the injured leg on a soft pillow and fix this by two or more bandages. Splints may be put on the outer and inner sides of the pillow as a further safeguard from movement, and the legs should be tied together before the patient is moved.

Ankle, Fractured.—This is another fracture which is better left alone. Placing the leg and ankle on a pillow and securing the whole with bandages, strengthened by an outer or inner splint, is all that can be done.

Dislocations.—Dislocation is a fairly common form of injury, and one requiring immediate treatment, otherwise interference must be postponed on account of the swelling which takes place. So considerable, indeed, is this swelling when once it does occur, that until it subsides doctors are often unable to say whether there is any dislocation or not. The best that can be done is to rush the patient off to the doctor, or, better still, to get the doctor to come to the patient without delay. If the pain is excessive, the application of hot fomentations will be found soothing, but their tendency to hurry on the swelling must be borne in mind.

FITS.

There are four varieties of fits: fainting, hysterical, apoplectic, and epileptic. They form the most common of street emergencies.

Fainting.—The ordinary fainting fit is due to a temporary insufficiency

of blood in the head. Disagreeable sights or smells, bad ventilation, fatigue, and so forth, are among the more usual causes which give rise to it. The patient feels sick and giddy, and then suddenly falls to the ground in a state of unconsciousness. If he is left alone the condition passes off in a few minutes; but, as it is not desirable to allow it to last longer than possible, the return to consciousness may be assisted by smelling salts applied to the nose, or cold water sprinkled over the head. A faint may often be arrested by leaning forward and lowering the head to the level of the knees, thus assisting the return of the blood to the head.

Hysteria.—The chief symptoms of a hysterical attack are jerking movements, laughter or sobbing, panting, and bursting into tears. Stubbornness and opposition are prominent features. Try to open the mouth, and the teeth will be tightly clenched; if an effort is made to open the eyes, they will be firmly closed. To all appearance there is unconsciousness and an absence of pain, but these conditions are only “make-believe”, for though such patients may allow needles to be pushed into their skin, they are particularly careful to avoid injuring themselves in any way, and are remarkably alive to the sympathy or want of it which they receive from by-standers. While kindness merely aggravates the condition, harshness is not advisable. As the patient will take good care not to hurt herself, she may safely be left alone and allowed to recover “at her convenience”.

Apoplexy.—This condition, popularly known as a “stroke”, is due to some pressure on the brain, usually the result of a ruptured blood-vessel. The chief symptoms are unconsciousness, heavy breathing, blowing out and in of the cheeks, and usually paralysis of one side of the body. In the treatment of an apoplectic fit, rest and quietness are the points to be aimed at. “Do nothing” is the golden rule. The patient should simply be put to bed and the doctor sent for. All stimulants must be forbidden.

Epilepsy.—In an epileptic, as in an apoplectic, fit, the chief symptom is unconsciousness. In severe cases the patient suddenly falls to the ground, the body becomes stiffened, the head is thrown to one side, and there are signs of choking. This passes off and the stiffening relaxes, to be succeeded by convulsive movements of the whole body, and more or less frothing at the mouth. Gradually the movements quieten down, and after a short sleep the patient awakens up unaware of what has happened. Such a fit calls for no treatment other than that of preventing the patient injuring himself. The clothes about the neck should be loosened to prevent suffocation, and care taken that the tongue may not be bitten, nor the nails driven into the skin of the palm. This will be accomplished by the insertion of a piece of cork or wood between the teeth or in the palms.

SUSPENDED ANIMATION.

Drowning.—In treating the apparently drowned, all effort should be concentrated on the restoration of the suspended act of breathing. That is done by attempting what is known as artificial respiration, a process to which reference has previously been made in the section on poisoning.

There are four methods of carrying out artificial respiration, each called after its originator.

Sylvester's method (see plate) is the best-known. The patient is laid on his back, with some support, such as a pillow or a rolled-up coat, placed under the shoulders to expand the chest and keep the head thrown back. The chin is tilted well up to allow the free passage of air down the throat. Clothing about the neck and chest should be unfastened or removed. Any water in the mouth is easily got rid of by turning the patient over on his side. The operator, kneeling at the patient's head, takes hold of his arms and draws them up over the head, extending them as far as they will go, thus increasing the capacity of the chest and compelling the entrance of air. The arms are then returned to the sides, the elbows being crossed over on the stomach, on which they are firmly pressed by the operator to expel the air in the chest. The process is repeated at the same rate as natural breathing—about seventeen times per minute. As soon as the natural breathing has been fully restored the patient should be put in a hot bath for a few moments and then placed in bed with hot bottles round him. A stimulant, such as whisky and hot water, may be given if necessary.

Marshall Hall's method is less difficult to manage, but not so satisfactory. The patient is laid on his back, then half-rolled over on his side, the uppermost arm being pulled forward out of the way and pressure made on the side of the chest to expel the air. This rolling movement—from lying on the back to lying on the side—is repeated about seventeen times per minute until breathing is re-established.

Howard's method (see plate) differs from the above two, both in respect of position and of ease in carrying out. The patient is first placed face downwards, a coat or roll under his stomach, and one of his arms under his head to keep the mouth off the ground. Firm pressure is made on his back to expel any water which may be in his mouth, chest, or stomach. He is then quickly turned face upwards, a coat put under his shoulders, and his hands extended beyond his head. The operator then kneels and fixes the patient's hips with his own knees, and holds his own elbows firmly against his own hips. He next grasps the patient's chest at the sides and presses slowly, yet forcibly, with all his weight until his mouth is nearly close to the patient's. With a sudden push he springs back to his original position. After an interval of some three seconds the operation is repeated, and continued about eight times a minute until natural breathing is again established.



FIRST MOVEMENT

SECOND MOVEMENT

Schäfer's method (see plate) has the obvious advantage of being very easily applied by one person, and is also more efficacious than the older ones. The patient is placed face downwards on a roll of clothing, the roll being under the lower part of the chest. The operator places himself on one side of the patient's body, opposite the thighs and facing the head, and spreads out his hands over the lower portion of the ribs of the back and sides, and, gradually leaning on his hands, throws the weight of his body forward on to the patient. This compresses the patient's chest against the folded clothing and drives the air out. Without a pause the operator then recovers his position, pushing himself back by a slight additional pressure with the hands on the patient, straightening the arms meanwhile. An instant's pause is now made, and then the operator sways forward again. This forward-and-backward movement is repeated fifteen times per minute for half an hour or longer.

Suffocation by Poisonous Gases or by Hanging.—In these conditions, as in drowning, the suspension of normal breathing is the most vital symptom, and the one which demands immediate attention. Artificial respiration and abundance of fresh air is, therefore, the line of treatment to be followed.

Electrical Accidents.—As the use of electricity becomes more common, the accidents due to it increase in number. Such cases should be treated as cases of drowning, *i.e.* by artificial respiration. Wine or spirits should be studiously avoided.

Frost-bite.—Frost-bite does not commonly occur in this country. The treatment consists in gradually restoring the circulation to the frozen parts by rubbing with snow or cold water, care being taken not to thaw the parts too quickly. On no account must heat be applied.

Shock or Collapse.—This is brought about as the result of many accidents. The patient, who makes no movements of his own accord, lies flat on his back, his limbs flabby, his body clammy, his face pale, and his breathing feeble. When shouted at he may answer questions more or less distinctly, and he may or may not be sick. The treatment consists in heat, rest, and quiet. He should be put to bed, lying on his back with his head low, and hot bottles or hot bricks placed at his side and between his thighs, care being taken not to scorch him. A little hot meat extract may be given, or, should he be slow in coming round, tea-spoonfuls of brandy and water at intervals of half an hour. In cases in which the breathing threatens to stop, artificial respiration must be set up at once, and warmth improved by rubbing the body with the hands.

Concussion.—A concussion is a more or less severe shaking of the brain. The patient may merely feel giddy for a few minutes, or he may be unconscious for days. The symptoms are similar to those of shock, and the same points in treatment are to be followed out. No attempt should be made to rouse the patient, alcoholic stimulants are to be avoided, and milk in restricted quantity is the only diet which should be given.

Convulsions.—Infantile convulsions may proceed from a variety of

causes. The child squints and becomes rigid, and seems on the point of suffocation. The eyeballs are turned inwards with a fixed vacant stare, the face turns blue, and respiration almost stops. It should immediately be placed in a hot bath and a cold sponge applied to the head. All tightness round the throat should be removed, and the finger placed between the gums to let the air pass freely into the chest.

THE REMOVAL OF FOREIGN BODIES.

Foreign Bodies in the Ear.—Small bodies, such as peas, buttons, or seeds, frequently find their way into the ear, where they may cause serious mischief. The ear is, however, too delicate a structure to be tampered with, and a case of this kind should always be taken to a doctor without delay.

Foreign Bodies in Food-passage.—It not infrequently happens that a piece of meat is "bolted" and becomes fixed in the food-passage, giving rise to great distress and the risk of suffocation. A finger should at once be put into the mouth, and an effort made to hook the offender up. If this fails, a smart smack on the back may be more successful. A mouthful of bread or a drink of water may also be tried. When the lump passes into the gullet, it gives no further trouble. In the case of a harder substance, such as a button, a coin, or it may be a set of teeth, on no account should any effort be made to set up vomiting, nor should castor-oil or other purgatives be given. The diet should be confined to porridge, bread and milk, or beef-tea, and a doctor should be summoned.

Foreign Bodies in Throat.—Of a more serious nature is the accidental catching in the windpipe of some small substance such as a pip or a grain of rice. The irritation set up by its presence usually gives rise to coughing, which causes the foreign body to be expelled. Smacking on the back, and even turning the patient upside down, have both been attempted with success; but such steps are not advisable, the risk of instant suffocation being much too great. As a rule the intruder is coughed up.

Foreign Bodies in the Nose.—Beads, pebbles, peas, and so forth, are often pushed up the nose. The irritation and distress are considerable, and sometimes the surgeon has to be called in to remove them. If small, such articles may be sneezed out or drawn into the mouth by a sudden inspiration.

Foreign Bodies in Eye.—Specks of cinder, stone, or dust in the eye may often be got rid of by closing both eyes for a few moments. Railway engine-drivers, who are much troubled with such irritating intruders, have a habit of closing the unaffected eye and rubbing the lid towards the nose. The injured eye should on no account be further irritated by rubbing, as by doing so the eyeball may be scratched.

Lime in the Eye.—It is usually wisest to consult a doctor when one is unfortunate enough to get lime in the eye. The action of the lime on the delicate structure of the organ is highly irritating, and may impair



FIRST MOVEMENT

1. The person on the ground is lying on their back, with their arms extended to the sides. The person standing is leaning over, with their hands near the person on the ground.



the membrane. The eye may be washed with a tea-spoonful of vinegar in a cup of warm water. A drop of sweet-oil may be let into the eye at the outer edge and will have a soothing effect.

BANDAGES.

There are two forms of bandage: the triangular and the roller. The former are usually made of unbleached calico, and the latter preferably of flannel.

Triangular Bandage.—To make a triangular bandage (fig. 572), take a piece of unbleached calico or old linen and cut from it a square, each side of which equals 36 inches. Divide the square into halves, cutting diagonally from corner to corner. This will give two bandages, each of triangular shape.

The triangular bandage may be applied in various ways. Folded as a simple scarf, it is used to fasten on splints, to arrest bleeding, and to fix the limbs to the body or to one another. In the form of a sling



Fig. 573.—Triangular Bandage adapted as Sling for Arm.

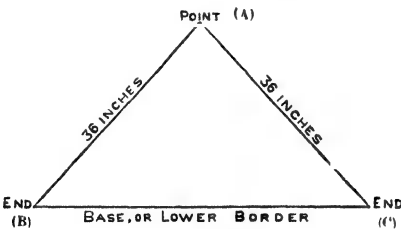


Fig. 572.—The Triangular Bandage.

it is a useful support for fractured arms, and is valuable in supporting the weight of the arms in cases of broken collar-bone or shoulder. Used opened out it is at once the most easy to apply, and the most secure when applied, of any form of bandage in accidents to the head; and in this open form it does excellent service in accidents to the hand, foot, shoulder, chest, and buttocks.

As the mode of applying the triangular bandage varies according to the different parts of the body to which it is applied, a brief description of its application in the various forms of injury is necessary. For the sake of clearness, the right-angled corner of the bandage will be spoken of as A, the lower angles as B and C respectively.

The Sling.—To form the ordinary sling (fig. 573), place the bandage across the chest, so that A is on the level of the elbow of the injured side,

B reaching slightly over the opposite shoulder, with C hanging down from it. The arm is then placed in position, being slightly higher at the wrist than at the elbow to permit of free circulation, and C is carried up over the shoulder of the injured side and tied to B. The knot should be at one side of the neck, so that it may not interfere with the comfort of the patient when lying down. The arm is finally secured by bringing A over the elbow and pinning it to the sling. To afford the necessary support the sling should be rather shorter than is required merely to rest the arm.

In fractures of the humerus the weight of the elbow is advantageous in preventing overlapping of the broken ends of the bone. In such a case the sling is modified to permit of this weight asserting itself. The bandage is folded like a scarf, the wrist laid in it, and the ends passed over each shoulder respectively and fastened. Whereas, however, in the ordinary sling the end of the bandage which lies in front of the arm is passed over the shoulder of the injured side, in the scarf sling the position of the ends is reversed, and the one in front of the arm is passed over the shoulder of the uninjured side.

Head Bandage (fig. 574).—This is a simple bandage to apply, and with attention to one small detail it is one which is not likely to slip off. A is placed at the nape of the neck and the bandage laid over the head, B and C



Fig. 574.—Triangular Bandage arranged as Shawl Cap for the Head.

lying at equal distance from each other on either side of the root of the nose. The ends B and C are then drawn backwards, crossed over A, and again carried forward to the front of the head, where they are tied above the root of the nose. This done, A is then lifted over the crossed B and C, and pinned as far forward on the crown of the head as it will go without pulling. The small detail referred to consists in seeing that B and C are crossed below the occiput—*i.e.* underneath the head, or in other words, at the top of the neck. Unless this precaution is taken, the bandage is certain to slip off.

Bandage for Chest or Back (fig. 575).—This is convenient for keeping on poultices. A is placed over one shoulder; B and C, hanging downwards over the chest, are passed round and tied at the back under the shoulder



FIRST MOVEMENT

over which A hangs. The end which is thus left longer than the other is carried upwards and tied or safely pinned to A. Care should be taken that the knot is tied where it will not interfere with the comfort of the

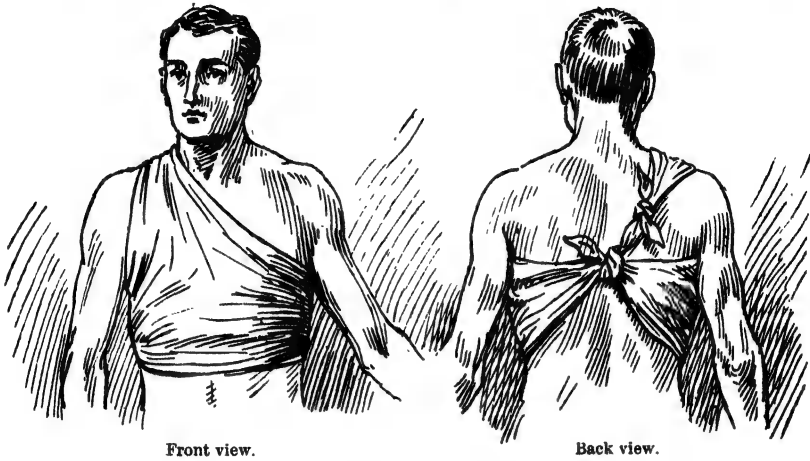


Fig. 575.—The Triangular Bandage applied to the Chest.

patient when sleeping. To bandage the back the process is simply reversed.

Shoulder Bandage.—Either one or two bandages may be employed in bandaging the shoulder. When two are used (fig. 576) place one over the injured shoulder, A nearly touching the ear, pass B and C round the arm, cross them, bring them to the front, and tie them there. Make a small arm sling of the other bandage and support the forearm with it. Let this sling pass over that part of the shoulder bandage that reaches up to the neck. Fold down A over the sling, and secure it with a safety-pin.

When one bandage only is used the shoulder is covered by the middle of the triangle, A reaching up to near the ear, and B and C passing round the arm below the shoulder, where they are crossed, and the ends carried up over A and tied above the shoulder. A is then turned down and pinned.

Elbow Bandage.—A is placed on the middle of the arm and the joint covered by the centre of the triangle. B and C are then passed round below the joint, crossed behind, and again brought round to the front above the joint and tied. Over the knot A is pinned.



Fig. 576.—Bandages for Shoulder, Hand, and a small Arm Sling.

Hand Bandage.—The bandage is laid out flat and the hand placed in it, the end of the middle finger being in the centre of the triangle and pointing to A. A is turned over the hand, B and C are crossed behind, passed once round the wrist and tied on the back of it. A is turned down and pinned.



Fig. 577.—Triangular Bandage applied to the Hand.

Bandages for Buttocks.—The buttocks are bandaged with two bandages in a similar manner to the shoulder. The one, folded as a scarf, is passed round the waist and pinned. A is secured to the scarf in the middle line of the hip, and the centre of the triangle encircling the buttock, the ends B and C are passed round the thigh and tied.

Knee Bandage.—This is applied in the same manner as the bandage for the elbow.

Foot Bandage.—The foot is bandaged in the same way as the hand, the end of the great toe occupying the centre of the triangle.



Fig. 578. —Roller Bandage.

Roller Bandage.—The roller bandage is made in various sizes and of various lengths. The most useful sizes are from $4\frac{1}{2}$ to 6 yards long and from $2\frac{1}{2}$ to $3\frac{1}{2}$ inches wide. For emergency purposes they are not so convenient as the triangular bandage, being much more difficult to apply. In certain cases, however, as, for example, where firm, even pressure is required, they perform a part which the triangular bandage cannot play, and for this

reason it is necessary to learn to overcome the initial difficulties in using them. In applying the bandage it is held in the right hand and guided with the left. As the diameter of the various parts of the body—

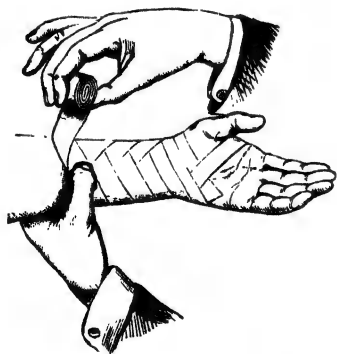


Fig. 579. The Reversed Spiral Bandage.

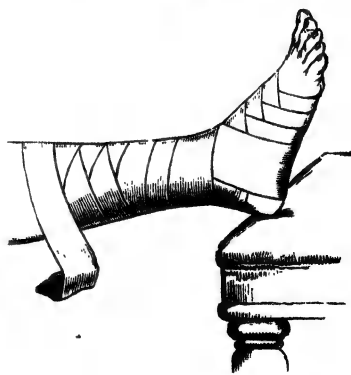


Fig. 580.—Foot and Leg Bandage.

the limbs, for example—is not the same throughout, in order to secure an equal pressure at both edges of the bandage it is essential to reverse the folds at every round. This is done, not by turning the roll in the hand, but

by holding it so loosely that the mere act of bringing it down causes the fold to fall over (fig. 579). A few minutes' practical demonstration will explain the process better than any written description. There are various ways of applying the roller bandage, but for temporary help the method indicated answers sufficiently well for all cases.

MISCELLANEOUS INJURIES.

Bruises.—These are best left alone unless taken in hand before the commencement of discoloration, when cold-water cloths or the acetate of lead lotion may be useful. A compress of a cold-water cloth helps to modify the swelling if applied at once.

Burns.—When a person's clothes catch fire the flames must be smothered with whatever is nearest. The burned person, if alone, should roll himself on the floor, if possible wrapping a blanket or hearth-rug round him, until the flames are extinguished. If other persons are present, they must smother the flames with rugs, overcoats, table-cloths, or with their own clothes if nothing better be within reach. The shock which a burn may produce cannot be estimated merely by the extent of the injury. On no account must the burn be exposed to the air. If clothes should be adhering to the burnt surface they must not be removed from it, the adherent parts may, however, be cut round and left until the arrival of the doctor. If any of the burn is exposed, it should be covered with sweet-oil and cotton-wool. Should the patient show signs of collapse, tea-spoonfuls of brandy may be given every half-hour.

In less severe cases, such as a simple scald or scorch, the pain may frequently be relieved by covering the injury with cloths soaked in a strong solution of washing soda. Lint steeped in carron-oil has a similarly beneficial effect.

Scalds of Throat.—The drinking of scalding fluids, or the inhaling of steam from a kettle, may be followed by serious consequences through swelling of the throat or gullet. Such cases are deceptive, for though they may be apparently simple at first, great difficulty in breathing may develop suddenly at any moment. They require the close attention of the doctor.

Sprains.—Sprains are a striking example of a class of injury the effects of which may by immediate treatment be minimized to a very marked degree. A sprain is caused by a sudden twist tearing more or less severely the ligaments of a joint. In the ordinary course of things the result is redness, swelling, pain, and temporary uselessness of the joint injured. If the joint is bathed at once in very hot water, or firmly compressed by wetted roller bandages, and kept at perfect rest, the evil consequences may be arrested. Even when the swelling has started, the hot water or hot-water fomentations will do much to limit the extent of the rising and to modify the pain. If this treatment is unsuccessful in arresting the swelling, or if the sprain

is not taken in time, it is better to consult a doctor without further delay. There is often a risk, especially when the knee is affected, of a stiffening of the joint not easy to get cured.

Insect Bites.—The sting should be pressed out with a watch-key, and the part afterwards rubbed with a weak solution of ammonia.

Bites of Dogs.—In many ambulance books the application of some strong caustic, such as nitrate of silver or nitric acid, is recommended in the case of a bite from a dog or other animal. The general application of caustics is, however, so dangerous a proceeding that the advisability of recommending it is ques-



Fig. 581.—Four-handed Seat



Fig. 582.—Three-handed Seat.

tionable. It is safer in every way merely to tie a handkerchief tightly round the bitten limb, between the bite and the heart, and rush the patient off to the nearest doctor.

Sunstroke.—The patient should be placed in the shade, and laid flat on his back with his head raised. Cold water should then be dashed over his head and face, and the clothing be loosened round the neck. Stimulants must on no account be given.

Wounds.—These should be sponged with a perfectly clean cloth, using warm water to which a little Condy's fluid has been added. Bleeding should first, of course, be arrested in the usual way.

The Removal of the Injured.—In all cases in which "First Aid" is called for, the proper removal of the injured person is a very important feature of the treatment. By careless handling not only is much unnecessary pain inflicted on the patient, but injuries which in themselves are simple are often converted into serious ones. The directions here given



Fig. 583.—Two-handed Seat.

apply equally to the removal of patients in cases of accident in the street or in the home. Conveyance by stretcher is not referred to, for the reason that where a stretcher is kept there is always someone to be found who has been specially instructed in the methods of conveyance by such means, and the instruction given in this section is only intended to enable the reader to assist in cases of emergency until someone better instructed arrives upon the scene.

For most injuries, if the patient is unable to walk, some form of the "sedan chair", reminiscent of childhood and playgrounds, is the most convenient mode of conveyance. Two carriers are required, and they may adopt any one of three forms:

1. Standing side by side they may interlock the hands most distant from one another and place the nearest ones upon each other's shoulders, thus forming a chair with a back (fig. 583).

2. Standing in the same position, both hands of the right carrier and the left hand of the left carrier may be joined to form a triangular seat, the right hand of the left carrier being placed on the right carrier's shoulder to form the chair back (fig. 582).

3. Both hands of each carrier may be joined to form a seat having no back, the patient supporting himself with his hands on the carriers' shoulders (fig. 581).

If the patient is able to support himself at all, the last is the best method of the three, being less fatiguing to the bearers—an important consideration if the patient has to be carried any considerable distance.

In the case of a patient unable to offer any assistance the first form of chair must be adopted. The bearers, standing one on each side near the haunch-bones of the patient, stoop down and each gets the nearest hand under the patient's shoulders and the vacant hands under his knees. Taking care to see that their hands are firmly clasped they then slowly rise to the upright position, and proceed to remove the patient to his destination, whether that is his bed, a stretcher, or a cab. Of the two forms of public conveyance the four-wheeled cab is preferable to the hansom in that it allows the patient to lie from seat to seat.

DEATH.

Notice to Registrar.—In the case of a death, notice must be given to the registrar of the district in which it has occurred within five days of its occurrence. The party notifying must supply certain particulars, viz., date of death, name of deceased in full, sex and age, rank or occupation, cause of death.

He or she must also sign his or her name, stating occupation and residence. A copy of this certificate must be delivered to the undertaker before

burial takes place. Any interment without such a certificate involves a heavy fine.

Inquest.—An inquest is held on any body found dead, in the case of a death which has occurred under suspicious circumstances, or where the true cause of death is not known. Such inquests are in the public interest, and are a preventive against the unlawful taking of life. In Scotland the inquest is unknown, an inquiry by the procurator-fiscal taking its place when necessary.

Funeral.—It is usually best to leave all the arrangements in the hands of the undertaker, having first made an understanding with him as to his charges. Intimation of death should be sent to all the members of the family at once.

INVALID COOKERY.

General Remarks.—Different ailments bring with them the need for observance of special rules of diet, but a few general principles may be laid down which are applicable in all cases, and which, duly observed, will assist the inexperienced, and will serve as warnings against some common errors, which, though trifling in themselves, have sometimes serious consequences.

1. An invalid's meals should be served in small quantities and made to look as tempting as possible. Little surprises work wonders, and changes of flavour and appearance, within *the limits allowed*, are worth notice. Many a meal is coaxed down by reason of some little variation in the dish.

2. Don't ask the patient what he would like.

3. All food should be carried covered to the patient.

4. Drinks left at the patient's side should be covered.

5. Use a separate set of cooking-vessels when possible—**fire-proof china** or enamelled vessels are most suitable. In any case they should be absolutely clean ones. A sick person will detect a "foreign flavour" more quickly than a person in health. No pains should be spared to avoid this.

6. Cooking odours should not penetrate to the sick-room, and cooking should never be done in the room.

7. A measuring-glass is as useful for food as for medicine. Spoons vary in size, and to be accurate one must use a glass in critical cases.

8. Food from the room of an infectious case must be burnt; no other method of disposal is safe.

9. Whatever the food ordered, if its effect upon the patient is contrary to expectations, tell the doctor.

10. Should solid food be forbidden, remember that violation of the order may mean death to the patient, *e.g.* in typhoid fever or ulcer of the stomach.

11. Mixed meals upset some people. This should be noted and acted upon.

12. Peptonized foods, and some other varieties, are to be given subject to doctors' orders only. Speaking broadly, the amount of nitrogenous food required when a patient is worn by fever would be bad in gout and kidney troubles. "Starchy foods, good for the lean, are harmful to the diabetic. Fat that is necessary for the consumptive is out of place where the bilious are in question." As to dyspeptics, one may want food peptonized, another requires bulk to stimulate the intestines. A dozen more instances might

be given, but enough has been quoted to prove the necessity for strict obedience to doctors' orders.

Convalescence.—This tries both patient and nurse. Whether the appetite be feeble, or fitful, or abnormal, much tact and common sense are needed if relapses are to be avoided, and it is well known that these are often traceable to errors in diet.

After a long illness, and with it a wearisome round of slop-foods, indigestion may result from a sudden change to solids, for the stomach requires leading by easy stages back to ordinary diet. Then nice little dishes of the semi-solid class are a boon; ample variety, tempting appearance, tasty flavours, and perfect nutrition can all be obtained by forethought. Given a list of such dishes, there will always be plenty left to the discretion and inventive power of the nurse.

To make this clear: how many unduly take an extremely narrow view of the doctor's instructions! The remark that only farinaceous puddings are suitable does not imply that they must be of one or two kinds of grain, yet hosts of nurses never rise above rice or sago. They need not always be baked and served in just the same way. The same with gruels and porridges. The changes may be rung in a dozen ways, and while within the available limits it is not possible to describe many kinds, it is hoped that the recipes will suggest many others, whatever the nature of the dish.

To assume that the day the patient leaves his room he is able to eat and drink whatever may be provided for the family is a serious error, and to steer clear of it should be the aim of all in charge of the sick.

Dishes and Drinks, To Keep Cool.—A simple way is to keep a cloth wrapped round a jug. Wet the cloth from time to time in cold water and replace it. Or place the jug in a deep vessel containing cold water with a large handful of coarse salt to the quart. By adding a little saltpetre to the water the cooling is quickened. When wanted in a great hurry either liquids or solids can be put in a small vessel and placed in a second one containing broken ice and pounded salt, two parts ice to one of salt; cover and place in a cold place. This is the best way of "setting" jellies and creams quickly. Of course all one's efforts are futile unless the articles be put out of the rays of the sun. No pains should be spared to serve cold dishes and drinks really cold, the half-and-half condition is very objectionable.

Note.—Never put ice into a beverage unless the doctor has ordered it. It might prove dangerous.

Ice, To Keep.—This method is very simple. A deep basin with a rim is wanted. Put a piece of flannel over it and tie it round the rim so that it hangs bag-fashion into the basin. Lay the ice in and cover with a second piece of flannel. The water that drains into the basin must be poured off as required. If a good-sized portion of flannel be used for the inside of the basin the four corners can be brought over to cover the ice. The object is to keep the ice from the action of the air. Another way is to place the ice in a strainer and set that over a jug or basin, covering it with a tea-cosy

or a few folds of flannel. Provision must always be made for drainage, for if ice is allowed to lie in water it wastes quickly. When buying ice, state when it is for internal consumption.

Ice should only be served to the patient in small pieces. Chip off bits the size of a coffee-berry or so, and if a supply has to be left by the patient's side a few of these little chips can be put ready in a tiny strainer placed in a glass. A large needle will serve for a chipper, with a thimble finger as the hammer.

Meat, Washing of.—While the utmost cleanliness is needful to free meat from any stained portions, it should not be subjected to indiscriminate washing or much of the nourishment will be lost. A slice from a leg of mutton, for instance, if left in cold water yields up its juices freely. A little salt rubbed on assists the removal of clots from the head and neck of rabbits as well as from those of the sheep or calf. But it is really better to cut off a part that is much stained rather than subject the whole to long soaking or washing; for example, in a neck of mutton remove the scrag end. Only the freshest and cleanest meat should be used for invalid dishes. For a little roast or grill in cool weather, of course, meat that has hung is suitable, as it will be more tender and fuller of flavour, but any meat with the slightest taint should be rejected.

Reheating of Food.—Many things can be warmed up, though some do not lend themselves to the treatment, and, where it is possible, more than common care has to be exercised in the cooking. The points to aim at are, the prevention of dryness, the retention of flavour, and, as far as possible, the retention of the digestibility. This latter suffers, as a rule, by too much heat being employed, or from re-cooking instead of reheating. There is a real difference between the two. The way in which the food was cooked in the first instance must also be kept in mind. Of what use is it to steam a pudding with care if the fag end be warmed in a fierce oven, or to make beef-tea and boil it up as wanted?

Here are a few ways that will at least save the food from spoiling. 1. A double sauce-pan kept for the purpose, handy for gruels, milk puddings, &c. 2. A jar set in boiling water (jars with lids are sold by ironmongers to fit the sauce-pans). 3. A pudding-basin for the reception of the food, to be covered and placed over a sauce-pan of water, simmering or boiling as needed. 4. Two saucers, one over the other, will hold a bit of fish, &c., and can be heated in a potato-steamer. 5. Cover the food and set it over a tin of water in the oven. The moment the food is as warm as wanted, serve it.

With beef-tea or soup, supposing half a cupful to be poured into a sauce-pan, there is waste as well as fear of the "boil" being reached un-awares. Better place the cup in a vessel of water or a steamer as above.

Fish is readily flaked or minced, and heated with a spoonful of sauce or hot milk. Poultry can be heated with a morsel of bread-sauce or any other suitable flavouring.

Seasonings.—Caution is needed in the use of seasoning, as the palate often craves for highly-seasoned dishes. In some cases a moderate amount

does no harm; in others its use is prohibited. To the inexperienced a little more or less of this or that which a patient may ask for seems a trifling matter; but small things assume large proportions in the sick-room. A cup of gruel may have a soothing effect upon a sufferer from a severe cough, but given a high seasoning of nutmeg it may be most irritating, because of the insolubility of this spice. Where thirst is troublesome, salt may have to be withheld; with some, pepper in the ground state gives trouble, while whole pepper used for flavouring does no harm. Acids are occasionally forbidden in all forms. In all cases the intelligence of the cook must be brought to bear.

Sweetening Agents.—Sugar is of course the commonest, but others are of value in many ailments. Pure honey is much recommended by some authorities. In tea or milk it is delicious; also in cereal puddings, as well as in barley-water and other cooling drinks.

Extract of malt is recommended, particularly for starch foods. It does not induce flatulence to the same extent as sugar does, and is of service in wasting diseases. It assists the digestion of starch; indeed, by the aid of malt, food that would otherwise cause discomfort becomes nutritious.

. It is a mistake to oversweeten food for the sick; it is easy to add, and it is well known that those who are partial to very sweet food in health dislike it in sickness.

Glycerine or saccharin should replace sugar only when medically ordered.

Beef Raw, Balls.—This is perhaps one of the tastiest ways of serving beef. A beefsteak of the best should be scraped so that a pulp is obtained. Fat, skin, and fibre are to be rejected. Moisten with cream, and shape into little balls. Take a hot baking-sheet or stout frying-pan and roll the balls over to brown the outside. They are not to be cooked. The object is rawness as near as possible, with an appetizing appearance. Where cream is unsuitable, moisten with a few drops of water. Brandy is sometimes medically ordered as an adjunct.

Beef-Tea, Hints on.—Whatever the strength—and the proportions of water to meat vary with the case—a few rules are to be observed, and may be thus summarized:

Skin, gristle, and fat are to be removed, and the meat cut very small either by hand or machine. "Chunks" of meat mean waste, for the amount of "tea" obtained is thus minimized.

Juicy meat is essential. The thickest part of the leg, or hip bone, or rump, or shoulder will furnish the right sort. Gelatinous meat that yields jelly when cold is not the part to choose.

Meat that has hung, and become dry, and frozen meat are not good; fresh meat is wanted.

Meat teas are best fresh. Make enough for twelve hours in cold weather; but only as required in warm weather.

Beef-tea should not boil at any stage of the cooking.

If meat and water can stand together for a time before cooking, the juices are more fully drawn.

Take a pound of meat and a pint of water; follow foregoing directions; add a pinch of salt, and place the jar (or basin) in a sauce-pan with cold water half-way up. Cover the jar, and put the lid on the pan. Bring the water in the pan to the boil as slowly as possible. This is needful; cooked fast, the meat hardens and clots, and much gravy is lost. Now let the water simmer only for a couple of hours. The tea can be strained through a coarse sieve or gravy-strainer. All should go through but the dry meat itself. Serve with toast or plain biscuits.

Note.—In all such preparations stir the meat now and then with a fork to prevent clotting. But cover again quickly, and never uncover over a smoky fire. This is a tea of average strength. For stronger, use half to three-quarters of a pint of water. For convalescents a little vegetable and a clove or peppercorns are used for seasoning. In acute illness even the salt may be forbidden.

When baked in a slow oven for a few hours beef-tea has a more savoury flavour, but does not suit all cases. A mixture of mutton and beef, or veal and beef, furnishes variety in this class of food.

Bread, Remarks on.—Those of long experience in nursing the sick know that change of bread is sometimes of great service; often a morsel of genuine home-made is asked for by the patient. Setting aside preference for a special sort, care to give good bread is of importance; it must not be new, or it may set up acute indigestion, nor should it be dry and chaffy. Whether whole meal or white should be given depends upon the case, and so many varieties are now obtainable that all needs can be met. In some disorders unfermented bread is found of service; milk-bread with a soft crust is handy for toast; bread of decorticated flour (finely ground) is enforced in some instances; while others require whole meal. Anyway, see that the bread is thoroughly baked; and where it cannot be made at home, the baker must be changed until the right thing is obtained. A recipe for one kind that is not easily bought in perfection follows.

Bread, Unfermented.—This is eaten by many vegetarians. It is simple, but needs careful manipulation. Add a gill and a half of milk and water mixed to a new-laid egg that has been beaten well. Then beat again for some minutes; without this there will be no success, for remember it is literally air-raised bread. Now put in, very gradually, some finely-ground whole meal that has been sieved, or if preferred, use half white and half brown flour. About 10 ozs. (1 oz. more or less) will be wanted; flour varies greatly in its absorbent properties (the better it is the drier it is). It should form a dough too soft to handle. Have ready some little tins, greased and heated, and two-thirds fill them; then bake in a sharp oven, giving the most heat at first. Salt is a matter of taste.

Note.—The egg not only adds to the nutriment, but in the beating of it a good deal of air is worked in. If liked stiffer (though it is less light), use enough flour to enable it to be worked on a board into little rolls; gash the tops, or prick well with a skewer. Cool the bread on a sieve, and do not take from the kitchen until cold.

For toast use bread a couple of days old and cut it evenly, a third of an inch thick, or even thinner. The object is to get rid of the moisture, so if cut thickly, or toasted too fast, the middle does not get done. Therefore toast slowly and brown evenly. Burnt toast, like all burnt food, is bad, and sets up heart-burn. Serve in a toast-rack—never put it flat or it toughens—excepting when it is to be buttered and served warm. In that case butter it lightly; if it is scraped, the crispness will be destroyed. Do not put it again to the fire to reheat, for that changes the flavour of the butter. If it has to be carried upstairs use a hot-water plate—a most handy thing in illness—or a basin of hot water as a substitute.

Celery.—This vegetable has many good properties, and is recommended to sufferers from rheumatism; but unless use be made of the liquor from it, the most valuable part is wasted. Celery, therefore, should not be drained and served apart from the liquor, whether water, milk, or stock. On the other hand, where the vegetable in its entirety does not agree, medical men occasionally order it to be thoroughly cooked until quite “raggy”, and the liquid “tea” drunk freely.

CELERY, STEWED.—Take the inner stalks and tie them with tape. Bring a mixture of milk and water to simmering point, place in it the celery so that it is covered, and cook in a stew-pan till tender. The time taken will depend on the age. It may require an hour, more or less. The liquid should be thickened with a little flour or arrowroot, a dessert-spoonful to the half pint, and then boiled for a few minutes and poured over the celery in the dish. A slice of butter or a spoonful or two of cream will enrich it. A small onion or shallot cooked with it adds to the savour, so does a bit of mace or a few white peppercorns. White stock and milk, or all stock, is equally suitable for the cooking.

Note.—Spanish onion and celery sliced, about equal parts, may be stewed together for variety.

CELERY, STEWED, RICH.—Shredded inner stalks of celery are to be cooked very slowly in a little fresh butter until soft; then mix a tea-spoonful of flour to a quarter pint of milk and cream, or all milk, and add; all must be cooked till tender. It is better if the celery be sieved before the final addition. The precise consistence is a matter of taste. Suited to cases where butter and cream in generous amounts are ordered.

Cereal Puddings, with Eggs.—One often hears the assertion that a rice or other cereal pudding cannot be made without eggs. This is an error. The plain pudding suits some far better; but when eggs agree, and are added for the sake of extra nutriment, they should not be put in at first, because the long, dry heat of the oven required for the starch is detrimental to the eggs. Therefore extra work is thrown on the patient's digestive organs. The mode to follow is to cook the grain and milk together until almost done, then to add the eggs when the mixture has cooled a little, and finish off in the oven. See “Tapioca Pudding, with Eggs”.

Chicken Dishes.—Chicken is sometimes the first kind of animal food allowed after a long illness. There are many modes of cooking other than

roast and boiled which are not only agreeable to the patient, but afford variety of flavours. The flesh cannot be too tender, and unless quite a young bird is obtained the skin may be removed with benefit.

CHICKEN, BROILED.—Take a bird and split it through the back and breast. It should be washed and dried well in advance of the cooking. Then cook half at a time. Or for a very small bird, not much larger than a pigeon, cut it through the back only and cook all. Heat and grease a clean broiler, and season the chicken with salt and pepper, then cook it, turning as wanted. Use a palette-knife or spoon, not a fork, or the gravy will escape. It will take half an hour more or less according to age, and must be well done, but not dry. Serve a cut lemon with it, also a roll or two of bacon or a little tomato sauce if allowed. Garnish with water-cress. When there is no hanging broiler, a Dutch oven answers. Or grill by range or gas-stove, observing the same rules. Pure salad-oil is good for greasing both bird and grill.

CHICKEN BROTH.—Take the bird (with the exception of the breast), wash, joint, and cut the meat from the bones, which are best chopped. Remove any fat. The feet are to be scraped and the giblets prepared with nicety. Add a little salt, and put all on with a couple of pints of water; more for a large bird, less for a small one, or if strong broth is desired. Bring slowly to the boil, and skim often. From four to five hours are needed; during this time, unless care is taken, the broth will boil away a good deal; little is wasted if it is properly watched. Then strain; a hair sieve is the best. When cold the broth is ready for skimming free from fat and for reheating and thickening. But sometimes in the simple form, minus seasoning and thickening, it will best suit the case.

To thicken, add corn flour or arrowroot, a dessert-spoonful to half a pint mixed with cold water; add the hot broth and boil for ten minutes. Rice flour is also good; allow a quarter of an hour's cooking. Crushed French tapioca is nice. Or rice is suitable, say a table-spoonful for a pint; the best way is to wash it, and soak it in some of the broth, then cook until done, and add the remainder of the broth, heating all together. A little chopped parsley may be used for a convalescent; and a few slices of vegetables may be cooked for the sake of flavour, even when not served in it. If the flesh is permissible, some should be removed before it has become raggy and be shredded or cut in dice.

Note.—The breast can be used for a separate dish.

Eggs.—As a rule, the more lightly cooked the more easily eggs are digested. But with all care eggs disagree with some. The white contains albumen in the purest form; when overcooked this is altered in character. Eggs must be fresh, and should be beaten and strained for puddings and other dishes. When added to soup, gruel, &c., further boiling must not take place, or the egg might curdle. Every dish is made lighter by the separate whisking of the white, owing to the amount of air that is capable of incorporation. This applies to puddings and the like that are afterwards to be cooked.

Egg, CREAMED.—Suited only to cases in which cream can be taken. Beat an egg with a pinch of salt and pepper, a dessert-spoonful of milk, and twice as much cream. Place the vessel (a small basin or cup) in a sauce-pan of water, nearly boiling, over gentle heat, and beat with a fork until the mixture thickens. Serve at once on toast. A little meat extract or any similar preparation can be put on the toast. Avoid hardening the egg.

Eggs poached in gravy are a change from those poached in water, being savoury. The gravy should be served with the eggs.

Eggs steamed are light. Use a cup or little mould, buttered, break an egg in and place in boiling water half-way up the cup. Set the pan where the water will just simmer, and as soon as the white looks opaque serve on toast. If in a china mould it can be sent to the patient.

Fish.—Unless fresh, fish is harmful and distasteful. Carelessly cooked and dished, its nutriment is reduced, and it is also unsightly. The white varieties are the most suitable, and the best of these are whittings and soles. Eels are specially ordered sometimes, but as a rule oily fish are not for the invalid. The same is true of shell-fish, oysters excepted.

FISH, FILLETED.—This is a digestible way of cooking, and is as well suited for a whiting or small fresh haddock, or any little flat fish cooked whole, as for fillets, due allowance being made for thickness.

Black skin should be removed, and the white for delicate patients, or it may be removed after cooking. Wash and dry the fish, and place between two deep plates or saucers, buttered. Season with salt and pepper and a little lemon juice. Place over a sauce-pan of boiling water for twenty minutes more or less, turning once. It will be white all through when done. This has the digestibility of boiled fish with more of the nutriment. Serve as it is, or, if with sauce, add the liquor from the plates.

FISH, STEWED IN MILK.—The fish may be a whiting, small sole, or a slice from a thick white fish. Wash and dry it, and lay it in a flat stew-pan with enough hot milk to cover. Simmer very slowly; it is well to put the pan in a larger one, or a covered dish can be used placed in a sauce-pan in a little boiling water. Time, from ten or twelve to fifteen or twenty minutes, according to kind and thickness of fish. Drain on a slice and serve with a sprinkling of lemon-juice, and make a sauce from the milk by adding a tea-spoonful of arrowroot, rice flour, or corn flour, first mixed with cold milk, to that in the pan. Boil up well, and pour round the fish.

This sauce is useful where butter disagrees. When allowed, add a little butter to the sauce after it boils up; it gives smoothness. Serve as soon as the butter melts.

Note.—A few peppercorns, a morsel of mace, a couple of cloves, a bit of onion, celery, or parsley are amongst the seasonings that will flavour the milk nicely in suitable cases.

Game Creams.—A quarter of a pound of the breast of partridge or pheasant, or a mixture of this and fowl, should be minced and pounded with a raw egg and a little seasoning, then added to the eighth of a pint or so of cream, and a bit of butter, half an ounce or over. Then add the

whipped white of a small egg. The meat is the better for sieving after the butter is in. Steam in little moulds three parts filled for fifteen or twenty minutes. Nice hot or cold, and easily reheated. Serve plainly, or with gravy or bread-sauce.

Jellies.—The time has gone by for reliance upon any kind of jelly, more particularly of the sweet class, as an article of nutriment. The food value of jellies is very trifling, rather are they to be regarded as vehicles for conveying other nourishment, such as wines and spirits; they are also cooling, and when not made too sweet, refreshing to the palate.

A stiff jelly is an abomination in health, but worse still in sickness; unless made soft enough to melt easily in the mouth it is very unpleasant, and however nicely it may be flavoured will not be appreciated. Many err on the side of over-stiffening for fear of the jelly breaking in turning out. But it is easy to avoid this by filling little moulds only; and should a jelly break it may either be chopped up and served in a little pile, or cut in convenient-sized pieces for eating. If made too soft for turning out it can be poured into small glass dishes to set, and so served.

A few hints in connection with jellies are worth noting. Everything in connection with the making of them must be scrupulously clean. Otherwise, if dust or grease gets in, the jelly will be cloudy. While cooling, keep it out of the dust, or it will be gritty to the palate as well as cloudy. Make small quantities only, particularly in warm weather. Do not leave it standing in the sick-room, for a half-melted jelly is very unattractive; and it has been proved that disease germs thrive in gelatinous bodies.

Note.—It is not necessary to make calf's-feet stock for jellies. The best English brands of gelatine and isinglass answer every purpose.

In the following or any recipes, unless the kind of gelatine is specified, the amount given must be looked upon as approximate, as the strength varies greatly. An ounce of "opaque" will equal from one and a half to two ounces of "French sheet" gelatine. With isinglass, an ounce or an ounce and a half, according to quality, may be wanted for a quart of jelly.

LEMON JELLY, SIMPLE.—Required, 1 pint of water and strained lemon juice mixed (from one-fourth to one-third of the latter), the rind of one good lemon, pared so thinly that it looks yellow on the under side; one clove, $2\frac{1}{2}$ to $3\frac{1}{2}$ ozs. of lump sugar (according to taste), $\frac{1}{2}$ oz. of the best isinglass, and the white and shell of one egg. The shell must be washed before the egg is broken. Then crush the shell, and mix with the rest, and whisk in a stew-pan over gentle heat. When the froth forms, and the jelly begins to boil, stop whisking. Let it boil up, then draw the pan back for ten minutes; it must barely simmer but be kept quite hot. Put the lid on in such a way that the steam can escape. Then strain through a clean scalded cloth, or bag if preferred.

Note.—An ounce or so of sheet gelatine may replace the isinglass. With opaque gelatines soaking is necessary; directions accompany the packets. If clearness is not an object, the orange jelly recipe may be used.

WINE JELLY, SIMPLE.—Sherry or Madeira may replace half the lemon juice in the above, a little less sugar being used. Madeira may be put in after straining; sherry is better passed through with the rest. Brandy (sometimes ordered to replace wine) need not be strained; add it after the first heat of the jelly has gone off.

ORANGE JELLY.—Required, the juice of one good lemon or one and a half if small, nearly half a pint of orange juice (quite half a pint if a full flavour be liked), water to make the whole one pint, the thin rinds of one or two of the oranges, the former if very large, the latter if medium, and 2 to 3 ozs. of lump sugar.

The water and orange rinds should be simmered with the sugar for eight to ten minutes, being brought gently to the boil and skimmed. Use a clean wooden or silver spoon, and strain through a clean cloth or piece of muslin, then put in the orange and lemon juice, strained carefully (for a single pip might cause serious trouble); stir now and then during the cooling.

To mould jellies, wash the mould in hot water, then let it lie in cold water for an hour or two, drain but do not dry it, and put the jelly in while it is liquid but not hot.

See "Dishes and Drinks, To Keep Cool".

PORT WINE JELLY.—Sometimes ordered when a patient has tired of the wine in liquid form. Much variation is possible, but this is a good recipe: a couple of ounces of lump sugar, the thin rind and strained juice of a small lemon, $\frac{1}{2}$ pint of cold water, $\frac{1}{2}$ oz. of isinglass, $\frac{1}{2}$ pint of port.

Rinse a china or enamelled pan with cold water, and simmer the water, sugar, fruit rind and juice, and isinglass, for twelve or fifteen minutes, skinning carefully. Pure sugar throws up little scum. When all the ingredients are dissolved, strain into a basin and add the port. When cool, mould; or use less isinglass, just enough to set it, and pour into a glass dish.

Note.—The wine must be good. A clove or small quantity of stick cinnamon may be used for flavouring. In many cases the acid must be omitted, and for some a spoonful of brandy may be advantageously added. A small tea-spoonful of red-currant jelly improves both colour and flavour.

Kedgerree.—This is a modification of the popular dish of everyday life which bears the same name; but it is much more nourishing and digestible, containing no hard-boiled eggs, and is more delicately seasoned. A little cooked fish, without skin or bone, should be blended with about an equal weight of well-cooked rice. A firm white fish is best. To a quarter of a pound in all, add a couple of tea-spoonfuls of cream and a little salt and pepper, with a pinch of chopped parsley, or a hint of nutmeg or grated lemon rind. Stir over steady heat until well warmed, then beat in the yolk of a fresh egg, beaten and strained. Stir again until hot through, then serve in a pile.

Note.—More cream may suit some cases: part of an egg is then enough.

For others, half an ounce of butter will serve instead of cream. Additional flavour can be got from a few drops of lemon juice or anchovy essence. A very useful way of reheating cooked fish.

Pigeon, Steamed.—The bird should be trussed as for boiling, then rubbed over with lemon juice and placed in an earthen jar with a pinch each of salt, white pepper, and ground mace; a slice of scalded onion is optional. A slice of butter should be put in and the jar covered. Then cook by the "water-bath" mode until done. Serve plain or with the gravy freed from the fat. Where butter disagrees omit it. With a young bird there should be tenderness and moisture. For convalescents, additions to the gravy can be made, either to add to the zest or the nutriment. Or a "made" gravy may be served, with the liquor from the jar added.

Rusks.—These are very useful, especially where a patient has wearied of toast. They may accompany beef-tea, &c., as well as milk, tea, coffee, wine, or spirits. The taking of something to nibble at with beverages assists digestion, because it prevents hasty gulping, which often leads to discomfort. The kind called tops and bottoms are of most general service.

Rusk Pudding.—Take rusks, and break up enough to fill a gill measure; heat a gill of milk (it need not boil), pour over the rusks, and when cool beat in a fresh egg. Flavour to taste. Bake in a lightly-greased dish in a moderate oven for half an hour or less. Serve with jelly or stewed fruit. Nice hot or cold. Lighter if the white of egg be whisked and added last.

RUSK PUDDING, SAVOURY.—Proceed as above, but use a gill of beef-tea, strong broth, or the gravy from a joint or anything of the kind, free from fat, and heated to just under simmering-point. Add the egg, bake, and serve. A useful dish for a patient on the way from slops to solids.

Rice Pudding.—This is generally acceptable when nicely prepared. However cooked, whether baked or steamed, it cannot be hurried with impunity. Time for the starch grains to swell is imperative; and to give them a chance to do this to the fullest extent sufficient moisture must be added. Common errors are insufficient milk and scanty time; it is obvious to the intelligent cook that the result must be hardened grains. A very moderate degree of heat is needed. Fierce heat means ruin to all puddings of this class.

RICE PUDDING, BAKED, PLAIN.—Use $1\frac{1}{2}$ oz. of the best Carolina rice to 1 pint of milk. Wash the rice and lay it in a baking dish, slightly coated with butter, or where that disagrees, rinse it out with cold water. Sweeten with $\frac{1}{2}$ oz. to 1 oz. of brown or white sugar or honey. Flavour with a little nutmeg or ground cinnamon. Let it stand an hour before baking, and cook for two and a half to three hours in a slow oven. For a firmer pudding use 2 ozs. of rice.

Note.—A table-spoonful or two of cream can be added for a richer pudding. Sugar may be omitted, and fruit jelly, or fresh fruit stewed and

sweetened, served with it. A simple sauce or custard gives variety. See "Cereal Puddings, with Eggs".

RICE SUET PUDDING.—Cook 2 ozs. of washed rice in 1 pint of milk for a couple of hours in a double pan; half the milk should be used at first, and the rest by degrees. Add from 1 to 2 ozs. of mutton suet, chopped as finely as possible, and about 1 oz. of castor sugar. When done let the mixture cool a little, then beat in a fresh egg strained, stir over the fire for a minute, then add a table-spoonful of brandy or other spirit suited to the case. Flavouring can be added. A very nourishing pudding.

Sweet-breads.—These are generally popular and have the merit of digestibility. They should be used while fresh only, and require careful preparation. However they are served, first blanch them.

This is done by soaking in cold water for a couple of hours, afterwards bringing to the boil slowly, using cold water and a delicately clean pan. Simmer for a few minutes, then plunge into cold water. All skin and fat should be removed with the fingers. The sweet-breads are then ready for stewing, frying, &c.

SWEET-BREAD IN MILK.—This is a very appetizing dish. Put some shredded celery, onion, and a slice or two of carrot and turnip at the bottom of a little stew-pan; lay a blanched sweet-bread on them, then cover with a buttered paper; add a few peppercorns and a pinch of salt and a little white stock. Simmer and baste with the liquid now and again till done, from thirty or forty minutes to an hour, according to size. The liquid should be strained and made into sauce while the sweet-bread is kept hot. A bit of grilled bacon and a slice or two of lemon may be served with it if agreeable.

Another way. Serve as above, but after draining the sweet-bread from the liquor brush it over with beaten egg, coat with raspings, and heat in the oven or before the fire. Or, dredge fried crumbs, as for game, over it, thus adding to the appearance without detracting from the digestibility.

Tapioca Pudding, with Eggs.—Wash 2 ozs. of tapioca freely in cold water, and put it to soak for two or three hours in 1½ pint (or rather less for a firmer pudding) of milk. In cold weather it may soak all night. Then cook together in a double pan until the milk is absorbed and the tapioca tender. The time depends on the kind and size of the tapioca, as there are many varieties. If no double pan is available, after the boil is reached place the sauce-pan in a tin with a little boiling water in it. When done, cool a little, and beat in two eggs, yolks and whites whipped separately. Sweeten with white sugar or honey, and add a little flavouring, nutmeg, cinnamon, grated orange or lemon rind. Then bake in a dish, leaving room for rising, in a steady oven, to a pale brown, for about a quarter of an hour. Tapioca has a tendency to boil over and catch to the sides of the dish unless carefully watched. Sprinkle with sugar and serve hot.

Toast.—See "Bread".

Vermicelli Pudding, quickly made.—Simmer 1 pint of milk with 1 oz. of vermicelli in a sauce-pan. Vermicelli cooks in less time than many other cereals and if crushed small three-quarters of an hour will suffice. Then sweeten and flavour, and beat in the yolk of an egg and $\frac{1}{2}$ oz. of butter or a spoonful of cream, and the white of the egg beaten to a froth. Either reheat for a minute, stirring well, or turn into a dish and give ten minutes in the oven.

Another way. Turn on to a hot plate after adding the egg to the vermicelli and milk, hollow the centre, and place a little sugar and butter in it. Many can digest butter in this form who cannot take a pudding in which butter has been baked. Warm jam or fruit-jelly instead of sugar makes a pleasant change.

BEVERAGES.

It is often very difficult to know how with safety to vary the drinks of those who are constantly complaining of thirst. The following will assist:—

1. Very weak coffee, quite pale, say an ounce to a couple of quarts of boiling water. 2. Weak tea, left to get cold. The less sugar in either the better. If milk be omitted, a little lemon juice improves the tea. 3. A quarter of a pound of oatmeal boiled in three or four quarts of water for half an hour, strained, and sweetened a little, and flavoured with a little fresh fruit-juice. 4. Thin rice-water, with a flavouring similar to the last. 5. Fresh fruit, as raspberries, currants, &c., boiled in water and sweetened after straining.

It is not easy to induce thirsty patients to make trial of a tepid drink, but it is well known that it will give relief. Of course this is not to be done when cold drinks have been ordered. Others are given in the recipes below.

Apple-water.—Sharp, juicy fruit is wanted; tough, flavourless apples are quite useless. Take two or three of moderate size, and wash and dry them, then slice without peeling. Add the thin rind and juice of half a lemon and from a pint to a pint and a half of boiling water; stuff a clean cloth in the neck of the jug, and strain when cold. A few lumps of sugar should be added. The patient's taste must regulate the precise quantities in all such beverages.

Another way is to boil the apples and water for half an hour. In this way more water can be used. Sweeten flavour, and strain.

Barley-water.—Barley must be scalded or blanched before use, or it is very unsightly, as from its sticky nature it picks up a good deal of dust. To blanch, cover with cold water and bring to the boil, then strain and rinse in cold water. To scald, wash it and cover with boiling water; let it stand, covered, for a short time, then rinse. The first mode is the better.

BARLEY-WATER, THICK.—Allow 2 ozs. to 3 pints of cold water; add the thin rind of half a lemon, and simmer for two hours. Add sugar to taste, and the juice of the lemon after straining. The consistence is a matter of taste: an ounce to the quart is enough for some. But if found too thick on cooling, it is easy to thin it down with more water.

Note.—By using less water and adding hot milk, a very soothing and nourishing hot drink is obtained. The lemon must be omitted.

A breakfast-cupful of milk and thick barley-water, added while hot to a raw egg beaten thoroughly, is strongly recommended.

BARLEY-WATER FROM PATENT BARLEY.—This can be made in a few minutes, thin or thick. The same barley is admirable for gruels. Directions accompany the packets.

Bran Tea.—A very old remedy for hoarseness. Medium bran is best. Take a good table-spoonful to a pint of cold water, and boil slowly for a quarter of an hour. Leave room in the pan or it will boil over. Sweeten with clear honey and strain for use. Some add a lump of butter. A strip of lemon peel is an improvement to the flavour.

Another way is to use more bran and make the tea in a tea-pot, allowing it to stand for twenty minutes.

Brandy Custard.—Heat together a quarter of a pint of milk, a lump of sugar, and the yolk of a fresh egg that has been beaten up with a table-spoonful or more of good brandy. Stir till thick and hot, then take it as it is or leave till cold. Very nourishing. Whisky custard is made in the same way. If raw eggs are being taken, simply heat the milk and sugar, and add to the egg and brandy, beating hard for a minute.

Egg Wine.—A glass of wine, any kind prescribed, is to be beaten up with an egg, and a quarter of a pint of boiling water added, the beating being continued. When more concentrated food is in demand, reduce the water by half. Sugar is optional. This often agrees, where a mixture of egg and wine alone does not.

Lemonade.—The thing to remember is to use a lemon with a clear rind, and to peel it so thinly that the rind is yellow on both sides. If it is thick, and the white inner pith gets in, the drink will be bitter. On an average from three to four lemons may be used to a quart of water; boil the water and pour over the rind and juice of the fruit in a jug. Use two or three ounces of lump-sugar, stir with a wooden spoon, cover with a clean cloth and set by. When cold, strain.

When lemons are not at their best a little acidity can be got by adding a pinch of citric acid; sugar is optional. The rind of half the lemons may be omitted if a strong flavour is not liked.

Note.—A mixture of oranges and lemons makes a pleasant drink. Though it is commonly classed with cool drinks, many find a glass of hot lemonade very acceptable.

Milk.—This is such a stand-by as a food in itself, and enters into so many dishes, either as a base or an adjunct, that more than common care is needed in its preservation. The very first essential is its purity; cleanliness

is important. Vessels should be kept for the reception of milk for the sick if a definite quantity has to be consumed in a given time. Use no vessels into which the hand cannot be got, and scald and dry them thoroughly. Buy no more at a time than is necessary. Keep away from the sun, and especially from food of strong odour or flavour, as milk takes up impurities quickly. Milk is a food, not a cooling drink, and should not be given when a thirst-quencher is asked for. "A perfect food in a liquid form" is its best definition. When baked slowly for an hour or two the flavour is different from boiled or scalded milk, and when the patient becomes tired of the latter, it may be substituted. Hot milk is a ready restorative, and is regarded as one of the best of night-caps.

Milk is more easily digested when taken slowly. Those who "gulp" it and find it hard to digest will do well to sip it before condemning it. When pure milk does not suit, the admixture of barley-water or lime-water may be tried. Separated milk, *i.e.* skim, is given with or without cream according to the case, when new milk is found to be too strong. Or, if it is desirable that whole milk should be taken, peptonizing must be resorted to if the curd cannot be digested in any other way. Those who water new milk, in view of aiding its digestion, have not studied its composition. Water does not take away or exert any influence over the curd or casein, which sets up vomiting, or gives pain to some.

Sterilized milk is in favour with many doctors. So is whey, which is often prescribed mixed with cream. Koumiss (fermented milk) is both nourishing and digestible, and has a large sale.

Toast-water.—So simple as to need no recipe, some will remark. Yet every medical man knows that it is one of the things often badly made. Use the crust of the loaf, the top is best. This will not "sour" so quickly as the crumb. It should be from bread of the best, and a few days old. Toast it very slowly so that it is dry throughout, and a rich brown without being blackened. Then break it up and put it in a jug of cold water; cover, and strain for use. It ought to be the colour of sherry. Make it fresh daily.

Various additions are often made, such as lemon-juice, raspberry vinegar, &c., but in the plain form it is a most refreshing drink. When water is poured over the toast the drink becomes thicker. Boiling water is preferred by many, but the clearness suffers. Barley-water and toast-water are sometimes mixed. Apple-water may also be added to toast-water. A little juice from stewed prunes, or a lump of melted jelly, lemon, or orange, gives softness.

HOME GYMNASTICS.

EXERCISES WITHOUT APPARATUS

In order to understand the objects of the following exercises, we must clearly comprehend the meaning of the term gymnastics. The popular interpretation of this word is a scheme of exercises on the horizontal and parallel bars, calling for both "knack" and strength. The interpretation here given, however, is a systematic and pre-arranged series of movements done in a definite manner and following in a definite sequence, the object of which is threefold, viz.:—I. *Hygienic*; II. *Corrective*; III. *Educational*.

I. The *Hygienic* object is attained by causing the various muscular movements to produce certain definite changes in the circulation of the blood and lymph, to promote a quicker breathing and a stimulation of the digestive apparatus so that better, deeper, and more powerful breathing results, and an easier and more complete digestion takes place. All of these create a more healthy body, the result of which is a greater possibility of work in the ordinary daily life, both the physical and mental; for the brain, being part of the body, and being supplied with blood in the same way as the other parts, must become healthier and allow of greater work; and as it is due to the brain that muscular movements are made, these will react also upon the physical powers.

II. The *Corrective* object is attained by making the exercises definite both in the positions from which they start (starting positions) and in the movements made from these starting positions. Any exercise (and by exercise one can mean a position taken up without strong muscular contraction) which has for its object the employment of the body to produce some result on matters outside the body, as all games and manual or sedentary occupations, must adapt the body to that object, and the greater this adaptation the more skill is produced, for this adaptation takes place in order to perform the movement required with the greatest economy of energy. Unfortunately this adaptation is never beneficial for the entire body, though it may be for parts, whilst in many cases it is bad for the whole body, especially in the case of exercises or positions which hamper the breathing and digestion through rounding the spine, poking the head forward, and allowing the shoulders to hang forward, all of which cause the chest to flatten, and also cause a slackening of the abdominal muscles, so that these organs are ill supported and indigestion creeps in. These

further cause an increase of the curve of the small of the back, which reacts upon the other curves of the spine, producing feeble breathing.

In order to overcome these evils, it is necessary to perform exercises whose results are specific and definite, and which can be, therefore, used to counteract the results of ordinary daily occupations.

III. The *Educational* object is attained by doing the exercises definitely and exactly, for, as mentioned under the *Hygienic* object, all muscular movements are primarily due to the action of the brain, as the muscles are connected directly or indirectly with this organ. All the movements with which we are familiar and do not think about, *e.g.* walking, required thought for their accomplishment at one time, but by constant practice they become automatic. The same fact holds good with habitual positions, and if these are bad for the body (see *Corrective* object), it is necessary to *think* whilst performing exercises whose objects are to correct these faults of position, and to try to get the "feel" of the good position until it becomes automatic. This is about as far educationally as home gymnastics will go; but if these are supplemented by "class work" in a gymnasium where rational gymnastics are taught, the educational possibilities are greatly increased.

The following exercises have been taken from the Swedish system of gymnastics, and, in order to overcome lack of space and cost of apparatus, use has been made of ordinary furniture and house fittings, so that with a little ingenuity it is possible to perform all the exercises.

In certain cases alternative exercises have been given, so that where it is not possible to do one exercise of a certain type owing to lack of suitable fittings, and to suit weaker persons, others of that type can be employed instead.

They have also been arranged in a certain sequence which should be followed, as this arrangement has been made with a view to preventing congestion of blood in any particular part, and so producing damage to the heart and lungs.

In *all* cases, start with *small* movements done as definitely and as exactly as possible, from as correct a starting position as it is possible to take up, and gradually increase to larger movements, which must still be definite and correct. Also start with a few repetitions and proceed to a larger number. If properly organized, no time need be lost between exercises, so that, when learnt, the whole should not take more than 10 minutes to a quarter of an hour.

Those done with breathing should be done in the rhythm of that act, which is usually—inspiration, expiration, pause, and so on; and this rhythm, which should be comparatively slow at the commencement of the period of exercise, gradually and naturally quickens somewhat towards the end, so that an increase in the speed of performance takes place to some extent.

If out of breath to any extent after the trotting and quick heel raising and knee bending in IX. and XIV., a short pause should be made before proceeding to the next.

Nos. III., V., VI., VIII., XI., and XII. are particularly beneficial for indigestion, constipation, and such digestive disturbances. Nos. V., X., and XII. are directly useful to golfers, for V. increases the balance, X. loosens the shoulder joints, and XII. develops the body muscles used in the "swing". No. VII. (b) is useful for swimming, when the breast stroke is employed, as it develops the back muscles used in that exercise.

From the foregoing it will be seen that the object of "rational gymnastics" is not to develop muscle for its own sake, but to make use of the muscles in certain definite ways in order to attain the threefold object, and the muscles will develop through their use; and furthermore, the various joints are thoroughly worked, which makes the body supple and tends to prevent rheumatism. It is inadvisable for persons with weak or strained hearts to attempt home gymnastics unless under the direct control of a medical man, though, if carefully and properly applied, much good can result from their use; but a scheme of exercises other than this would be required. It is also inadvisable for women to attempt these exercises at certain periods. At the end will be found a form for recording measurements at regular intervals, with directions as to the taking of these, so that any improvement may be seen at a glance.

No hard-and-fast rule can be laid down as to when the exercises should be carried out—as the morning suits some persons, whereas the evening suits others—but it is harmful to take exercise immediately before or after a meal; half an hour should intervene before a meal, and from 1½ to 2 hours after. Always exercise with the window open, and if in the morning, the teeth should be cleaned and the nose blown first; also, do not turn down the bedclothes until the exercises are over.

With regard to clothes, the fewer the better; but care should be taken in winter to prevent chill, though, if the habit of exercising stripped is commenced in the summer, with a little ordinary care it can be continued in the winter and with distinct benefit, due to the greater ability of the skin to react to the temperature, thus preventing colds, &c.

The term **Progression** in the exercises refers to the steps taken in each exercise to make it harder. The object in making an exercise harder is not with a view to merely being able to do the harder exercise with gradually greater skill for its own value, but to produce more and more pronounced effects, and to make the difficulty of the exercise such that there is always some effort of will required, and therefore an unconsciously greater muscular action, enhancing the threefold effects desired. It will be noticed that in some cases this is obtained by a change in the "starting position", whilst in others it occurs through a change in the method of performing the movement.

EXERCISE I.—Reach grasp standing; raising heels and bending knees.

Starting Position—

1. Stand, at arm's length, facing the mantelshelf, high bedrail, dressing table, &c., as *straight and erect as possible*, with the legs straight

and together (never mind the heels), and the feet turned well out.

2. Lightly grasp the mantelshelf, &c.

Movement—

1. Slowly raise the heels as high as possible, keeping the knees stiff.
2. Slowly bend the knees, spreading them well sideways, taking care that the heels are not lowered nor the body bent forward whilst doing so.
3. Slowly stretch the knees, until again standing on tiptoe.
4. Slowly lower the heels.

*Performance—*4 times.

*Progression—*Gradually make the knee bending deeper from day to day.

Faults to Avoid—

- Heels not fully raised.
- Heels lowered whilst bending the knees.
- Body not kept erect throughout the exercise.
- Movement done in jerks.

Effects—

The exercise does not require any great muscular strength, but it strengthens the leg muscles and joints, and prepares the body for the subsequent exercises.

EXERCISE II.—Stretch back support standing; pressing arms and head backward.

Starting Position—

1. Stand, as erect as possible, with the legs and feet as in Exercise I., and the back touching (not leaning against) the mantelshelf, high bedrail, chest of drawers, &c.
2. Then stretch the body up a little more, if possible.
3. Then, keeping the body so stretched up, raise the arms above the head so that they are *stretched* upward as far as possible, with the palms of the hands turned towards each other and the arms not closer than the width of the shoulders, and in a straight line with the body.

Movement—

1. Try to slowly press the *fully stretched arms* and the head, *with the chin drawn in*, backward, and take in a breath.

This will cause a bending backward of the body, but no effort should be directly made to do this; the effort should be to *press the head and arms backward*.

2. Allow the head, arms, and body to return to the starting position, No. 3, and breathe out.

*Performance—*4-8 times.

Progression—

Of the support. Start with the support just below the shoulder blades, and with a slight range of movement and *gradually* from week to week, lower the support to the back of the rump and increase the range of movement.

Of the arms. If they cannot be got into a straight line with the body to begin with, raise them sideways only so far as will allow them to do this, and *gradually* raise them higher till they are parallel, as Exercise X. gradually loosens the shoulder joints.

Faults to Avoid—

Poking the head forward when raising the arms for the starting position.

The arms coming in front of the line of the body in the starting position.

The elbows bent, i.e. the arms not fully stretched.

The arms closer than the shoulder width apart.

Leaning back against the support.

Bending the knees by raising the heels, and pushing the waist forward when pressing the arms and head back.

Holding the breath.

Effects—

The movement has only a comparatively small range, but is strongly corrective for round back, flat chest, and round shoulders, which are the outcome of so many occupations.

It results in an increased flexibility of the chest, which reacts beneficially on many chest complaints.

It develops the back and shoulder-blade muscles.

EXERCISE III.—Standing; touch the toes.

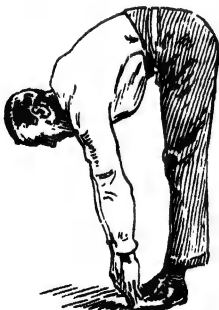


Fig. 584

Starting Position—

Stand upright, with the legs straight, away from any support.

Movement—

1. Bend down and try to touch the toes with *both* hands at the same time, keeping the knees straight (fig. 584).
2. Raise the body again.



Fig. 585

In doing this, reach *forward* and upward with the head, so that the head starts the movement and causes a hollowing of the back; try to make a scooping action with the head and back (fig. 585).

Performance—4-8 times.

Progression—

Start with the legs well astride, and gradually bring them together, until finally the inner sides of the feet are touching from heels to toes.

Faults to Avoid—

Bending the knees.

Reaching down lower with one hand than with the other.

Not reaching *forward* and “scooping” in raising the body.

Bending the knees whilst doing this.

Effects—

This is a complementary exercise to the preceding, and by stretching the back of the legs makes for a healthier carriage of the spine and a longer stride in walking.

EXERCISE IV. (a).—Fall hanging; bending arms.

Starting Position—

1. Stand facing a table which is not placed against a wall.
2. Grasp the nearest edge with hands rather more than the width of the shoulders apart.
3. Allow the legs to slide forward, under the table, until the body is hanging, face upward, under the table, with the backs of the heels on the ground.

The legs should be together, and the whole body and legs should be in one straight line, and the head somewhat pressed back, with the chin drawn in.

This position can also be taken between two chairs, placed so that their seats are facing the person exercising.

Movement—

1. Steadily bend the arms, taking care to spread the elbows sideways and backward.
2. Steadily stretch the arms again.

*Performance—*3-6 times.*Progression—*

Start with a slight bending of the arms, *in the correct way*, and gradually bend them more and more *in this correct way*.

Faults to Avoid—

Allowing the body to hang down like a hammock, *i.e.* not keeping it straight.

Poking the head forward.

Allowing the elbows to come forward when bending the arms, and so flattening the chest.

Hunching the shoulders whilst bending the arms.

Pushing the waist up and bending the knees.

Trying to place the soles of the feet on the floor.
Holding the breath.

EXERCISE IV. (b).—Hanging; bending arms.

Starting Position—

Hang, as *fully stretched out as possible*, from the lintel of a door (or from a bar fitted between the doorposts), with the hands rather more than the width of the shoulders apart, and the backs of the hands towards the performer.

The head should be drawn back, with the chin drawn in.

The legs should hang of their own weight, and should not be braced back or lifted forward.

Movement—

1. Steadily bend the arms so that the elbows move sideways and backward, so that the chest becomes well expanded.
2. Steadily stretch the arms again.

*Performance—*2-4 times.

Progression—

At the beginning try to pull up between *straight* arms, so that the shoulders become pulled backward and downward, and then, by degrees, gradually bend the arms.

Faults to Avoid—

Allowing the elbows to come forward when bending the arms.

Poking the head forward and rounding the back.

Flattening the chest.

Bracing the legs back or lifting them forward.

Trying to touch the apparatus which the hands are grasping, and so flattening the chest.

Hunching the shoulders when bending the arms, instead of trying to pull them backward and downward first.

Holding the breath.

Effects of IV (a) and IV (b)—

If these exercises are done in the way indicated and the faults avoided, they develop the muscles of inspiration, and are supplementary to Exercise II.

Exercise IV. (b) will also stretch out the spine if the legs are not braced forward or backward, but are allowed to hang of their own weight.

If done wrongly these exercises flatten the chest, drag the shoulders forward, and round the back.

Incidentally, these exercises develop the muscles which bend the arms, wrists, and fingers.

EXERCISE V.—Standing; alternate knee raising (slowly).*Starting Position—*

Stand *erect*, with the legs straight and together, and the feet turned out.

Movement—

1. Shift the weight of the body on to one leg so that it is taken off the other, which bends slightly.
2. Raise the bent knee until the thigh forms a right angle with the body (fig. 586), the lower leg with the thigh, and the toe pointed downward.
3. Lower the raised leg.
4. Repeat 1 and 2 with the other leg.

Performance—6 times with each leg.

Progression—

To make the exercise more difficult, after some practice raise the knee and retain this position, and then turn the face slowly from side to side; or raise and lower the arms slowly and sideways; or stretch the knee forward, sideways, or backward.



Fig. 586

Faults to Avoid—

Looking down, and so dropping the head forward.

Leaning away from the raised knee instead of remaining erect.

Losing the correct position, if the leg is stretched after raising the knee.

Bending the supporting leg.

Holding the breath.

Effects—

Improvement of carriage through better balance of the body, reacting upon the breathing and digestion, and economy of energy in walking.

N.B.—With, or instead of, this exercise, do a balance walk along the edge of a long bath, taking care to *look up* whilst doing so.

EXERCISE VI.—Prone falling; bending arms.*Starting Position—*

1. The body, in one *straight line* from neck to heels, supported on the toes and hands, with the elbows straight.
2. The hands as wide apart as the shoulders.
3. The fingers turned to point somewhat *forward-inward*.
4. The head drawn back, with the chin in.
5. The chest pushed forward.

Movement—

1. Steadily bend the arms so that the elbows move somewhat sideways.
2. Steadily stretch them again.

*Performance—*4-6 times.

Progression—

1. The hands on a chair or edge of a bed or bath, the feet on the floor.
2. The hands and feet on the floor (fig. 587).



Fig. 587

3. The feet on a chair, &c., and the hands on the floor.
4. The feet on the mantelshelf, &c., higher than the shoulders, the hands on the floor (fig. 588).

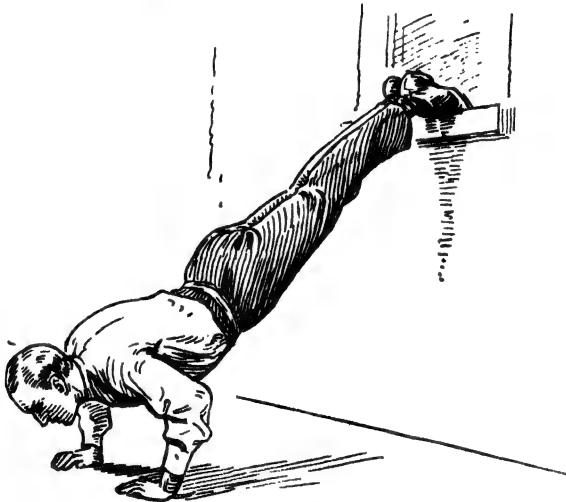


Fig. 588

Faults to Avoid—

Hanging the head down.

The body hanging like a hammock.

The chest flat and the shoulders rounded.

The position of the hands closer than the shoulder width apart.

The direction of the fingers such that the elbows cannot spread sideways.

Holding the breath.

Effects—

Strengthens the abdominal muscles, therefore aiding and stimulating the digestion, and also expanding the chest. The higher the hands

the greater the chest effect and the less the abdominal. Incidentally, it develops the muscles on the backs of the upper arms.

EXERCISE VII. (a).—Backward lean standing; bending body forward.

Starting Position—

1. Stand, with the legs straight and together, so that the heels are about 6 inches from the wall, and lean back until the whole of the back of the body is supported against the wall.
2. Bend the forearms upward, *keeping the upper arms close to the sides*, turning them outward so that the hands come up to the outer point of the shoulders, and the fingers and wrists loosely bent toward this part. This should cause an expansion of the chest if correctly done.

Movement—

1. Steadily bend the body forward from the *hips*, hollowing the back and pushing the chest forward whilst doing so, taking care to keep the rump against the wall and the knees straight.
2. Raise the body again.

*Performance—*4-6 times.

Progression—

Gradually bend the body more and more forward, taking care to keep the back hollow, and to make the movement from the hips.

Faults to Avoid—

- | | |
|---------------------------|--|
| In the Starting Position. | <p>The feet too far out.</p> <p>The knees not straight.</p> <p>The arms not correctly bent.</p> <p>The elbows not kept in to the sides.</p> <p>The hands in front of the shoulders instead of at the outer points.</p> |
| In the Movement. | <p>Dropping the head forward.</p> <p>Not pushing the chest forward.</p> <p>Not hollowing the back.</p> <p>Bending at the waist.</p> <p>Not keeping the arms correctly bent.</p> <p><i>Holding the breath.</i></p> |

Effects—

Strengthens the spinal muscles. Straightens the spine. Expands the chest. Therefore corrective of a round back and flat chest.

EXERCISE VII. (b).—Prone lying; body arching backward.

Starting Position—

1. Lie, face downward, on the floor at full length, with the knees kept straight and the feet under a chest of drawers or some other heavy article of furniture.

2. Place the hands on the *sides* of the hips, fingers in front and thumbs behind, just below the waist, and press the wrists downward, so that the fingers point forward-upward and the thumbs backward-upward.

Movement—

1. Steadily raise the body so that the head, moving first, as in Exercise III., makes a "scooping" action, and take in a breath, at the

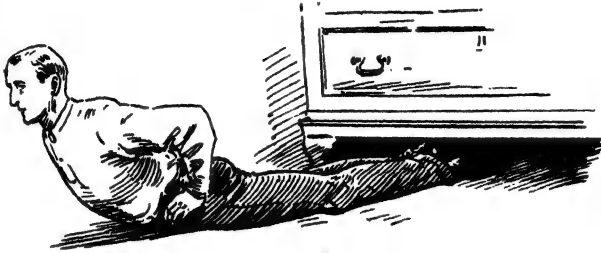


Fig. 589

same time pressing away from the hips, *i.e.* try to "get through the shoulders" (fig. 589).

2. Steadily lower the body and breathe out.

*Performance—*2-4 times.

*Progression—*To make the exercise harder, proceed as follows:—

1. Retain the raised position, and turn the face from side to side.
2. Lie with the feet clear of the furniture and raise both body and legs at the same time, taking care to keep the latter straight.
3. The same type of exercise as first described, except that instead of lying on the floor, lie with a chair under the thighs so that the knees are clear, and fix the feet under the side of the bed, or a drawer, &c., or some other thing which is on a level with the seat of the chair.
4. Hold any of these "arched" positions, and make the breast-stroke swimming movements.

Faults to Avoid—

Drawing the shoulders forward and poking the chin out.

Hunching the shoulders.

Bending the knees.

Lifting the body up so that it is bent over to one side. (Get some person to see that this does not occur, and then try to get the *feel* of the right position.)

Arching the body from the small of the back instead of farther toward the shoulders.

Holding the breath.

Effects—

Strengthens the spinal muscles. Straightens the spine. Strongly corrective of round back and flat chest.

EXERCISE VIII.—Backward lying; raising legs.*Starting Position—*

Lie on the back, with the arms *fully* stretched beyond the head, the hands grasping the under part of the chest of drawers, &c. (If this is some distance off the floor, place the hands behind the head and press the elbows down on to the floor.)

Movement—

1. Steadily raise the legs.
2. Steadily lower them again.

Throughout the whole exercise try to make the small of the back touch the floor by pulling in on the abdominal muscles.

*Performance—*4-6 times.*Progression—*Commence by:

1. Bending both knees up over the abdomen, then stretch them straight up in the air, and lower the straight legs slowly.
2. Raise each leg alternately an equal number of times.
3. Raise both legs together, first a little way and gradually until the legs are at right angles to the floor.

Faults to Avoid—

The arms bent or bending, if grasping any furniture. (The elbows lifting off the floor, if the hands are behind the head.)

The knees not straight when so required.

No effort made to make the small of the back touch the floor.

Holding the breath.

Effects—

Strengthens the vertical abdominal muscles. Assists and stimulates digestion. If done correctly, straightens the lower part of the spine.

EXERCISE IX.—Toe standing; trotting on the spot.*Starting Position—*Stand, *erect*, on tiptoe.*Movement—*Run, on the toes, on the spot.*Performance—*20-30 steps.*Progression—*

By raising the knees higher.

By increasing the rapidity of the run. (Not for elderly persons.)

Faults to Avoid—

Looking down. Running on a flat foot. When raising the knees higher, bending the body forward toward the knees.

Effects—

It acts on the circulation and respiration by slightly quickening both.

EXERCISE X.—Reach grasp standing; bending body forward.

Starting Position—

1. Stand *erect*, with the legs straight and together, a little more than arm's length from the mantelshelf, bedrail, chest of drawers, &c., and place the hands, palms downward, on top of the edge of this, a little wider than the shoulders apart, with the arms straight, so that the body leans slightly forward from the *hips* and with the back hollowed.
2. Straighten the back still more, if possible, slightly press the head back with the chin rather drawn in, and look just above the level of the eyes and get the *feel* of this position.

Movement—

1. Keeping the back straight and the legs stiff, press the body down between the *straight* arms as far as possible and try to get a *little farther*, so that a good stretching is felt on the upper part of the chest, and a good contraction of the back muscles, in the upper and middle parts of the back, is obtained.
2. Raise the body again.

*Performance—*4-8 times.

Progression—

Of the starting position. Start by grasping with the hands about shoulder height, and gradually, from week to week, lower it to just below breast height.

Of the movement. Gradually retain the position bent forward up to about a minute.

Faults to Avoid—

Bending the arms. Hanging the head. Rounding the back. Bending the knees. *Holding the breath.*

Effects—

Straightens the spine. Expands the chest. Loosens the shoulder joints.

EXERCISE XI.—Hip support side standing; arching body sideways.

Starting Position—

1. Stand as erect as possible, with the hip, sideways, against the bedrail,

dressing table, &c., the legs straight and together, and the inner sides of the feet touching, from heels to toes.

2. Stretch the arms out sideways on a level with the shoulders and force them somewhat backward, *on this level*.

Movement—

1. Lift up the chest.
2. Bend the body over toward the supported side, taking care that it does not twist whilst doing so, and keeping the arms fixed relatively to the body.

Attempt to push up the upper side of the chest.

3. Raise the body.
4. Lower the chest.

Performance—3-4 times to each side.

Progression—

At the beginning be satisfied with a slight bend in the *correct way*, and gradually deepen it.

After some practice combine 1 and 2, and 3 and 4, of the movement, so as to make only two parts instead of four.

Faults to Avoid—

Turning the head when bending over.

Allowing the arms to move separately from the body, instead of *fixing* them on the body and making the body take them over.

Twisting the body and so not bending directly sideways.

Allowing the hip to come away from the support.

Raising the foot on the side away from the support.

Bending the knee on the side nearest the support.

Not bending *through the same range* to each side.

Not bending an *equal number of times* to each side.

Holding the breath.

Effects—

If done correctly, it tends to prevent lateral spinal curvature and to correct a slight one. Assists and stimulates the digestion and the action of the liver. Supples the chest and spine.

EXERCISE XII.—Ride sitting; twisting body.

Starting Position—

1. Sit astride a chair, facing the back, with the feet placed firmly on the ground directly under the knees, and grip the chair with the latter.
2. Raise the arms sideways into a similar position to that of the last exercise.

Movement—

1. Lift up the chest.
2. Push the *chest* round as far as possible to one side.
3. Turn forward again.
4. Lower the chest.

*Performance—*3-4 times to each side, alternately.

Progression—

At the beginning get round as far as possible without paying too much attention to the shoulders and arms, and gradually attend to their faults.

After some practice combine 1 and 2, and 3 and 4, so as to make two parts to each side instead of four.

Later still, make the twisting quick.

Faults to Avoid—

Turning the face instead of the chest.

Allowing the arm, on the side away from which the twisting is made, to come forward (particularly when done quickly).

Allowing the arm on the side toward which the twisting is made to drop.

Leaning backward.

Rounding the back and flattening the chest.

Not gripping with the knees.

Not turning *through the same range* to each side.

Not turning *an equal number of times* to each side.

Holding the breath.

Effects—

Tends to prevent lateral spinal curvature and to correct a slight one.

Assists and stimulates digestion. Supples the chest and spine.

EXERCISE XIII.—Thigh firm back support sitting; pressing head backward.

Starting Position—

1. Sit erect on a chair, which has a back that will come up to about the lower part of the shoulder blades, so that the whole of the back of the body is against the back of the chair.
2. Place the feet firmly on the ground as in the last exercise.
3. Place the hands on the upper part of the thighs, with the fingers directed somewhat forward-inward and the thumbs alongside the forefinger.

Movement—

1. Press the head and neck backward, keeping the chin well drawn in;

press away from the thighs with the arms, pull the shoulders backward *and downward*, and breathe in.

2. Raise the head, relax the pressure of the arms, and breathe out.

Performance—2-4 times.

Faults to Avoid—

Dropping the head back instead of pressing it back.

Lifting up from the seat of the chair.

Allowing the lower part of the back to slide forward away from the back of the chair.

Bringing the shoulders forward.

Holding the breath.

Effects—

Strongly exercises and strengthens the muscles of the spine. Expands the chest.

EXERCISE XIV.—Standing; raising heels and bending knees (quickly).

Starting Position—

Stand as erect as possible, with the legs straight and together, and the feet turned well out.

Movement—

1. Raise the heels, quickly.
2. Bend the knees, quickly, spreading them well sideways (fig. 590).
3. Straighten the knees, quickly. An effort should be made to push the floor downward and the body upward, and at the same time to bring the legs strongly together.
4. *Quietly* lower the heels.

Performance—3-4 times.

Progression—

After some practice the knee straightening should be strong enough to propel the body into the air, in which case the sequence of the movement would be as follows:—

1. As before.
2. As before.
3. As before, but the body is pushed up into the air and returns to the position of 2 once more.
4. Straighten the knees, *slowly*.
5. *Quietly* lower the heels.



Fig. 590.

Faults to Avoid—

Hunching the shoulders at 1 and 3. Thumping the heels down at 4 [5]. The body not kept erect *all the time*. Looking down.

Effects—

This is a jumping exercise, and as such brings into play many muscles very strongly, and therefore makes for agility and general control. Strengthens the leg muscles and joints. Tends to quicken the breathing and heart beat.

EXERCISE XV.—Reach grasp standing; pressing arms downward with raising of heels and deep breathing.

Starting Position—

As for Exercise I., except that the hands should never be below breast height.

Movement—

1. Press down with the arms.
Pull the shoulders backward and *downward*.
Raise the heels as high as possible.
Take in a deep breath.
2. Relax the arm pressure, lower the heels, and breathe out.

*Performance—*2-4 times.

Faults to Avoid—

The arms bent or bending.
The shoulders hunched up or pulled forward.
The waist pushed forward.
The head moving forward.
The body hanging backward instead of going vertically upward "through the shoulders".
The heels not raised concurrently with the pressing downward of the arms.

Effects—

Has a strong influence upon the breathing, if done correctly, especially as regards the position of the shoulders.

The following table shows a useful form in which one may record from time to time the extent of the improvement in one's condition brought about by such a scheme of exercises as the above. The exercises are not meant for mere play or for performing feats of strength and endurance, but for healthy normal physical development, and it is therefore desirable to measure their effects in some definite way.

RECORD OF MEASUREMENTS

Date.	Height, Natural.	Height, Fully Stretched Up.	Weight.	Chest, Expanded.	Chest, Contracted.	Chest, Natural.	Abdomen.

Height, natural, should be that of the position usually held when standing.

Height, fully stretched up, shows the possible height, and therefore a comparison between these two will show whether the spine is being correctly straightened.

The chest measurements should be taken, *horizontally*, round the chest at the level of the lower end of the breast bone, the arms hanging loosely by the sides.

The abdominal measurements should be taken with the tape placed *horizontally* at the level of the top of the hip bones.

The weight should be recorded, making allowance for that of the clothes worn.

EXERCISES WITH THE EXPANDER.

The elastic expander is a simple but useful contrivance by the aid of which some exercises of special benefit to the muscles of the chest may be performed. It consists of a band of stout silk, about 4 inches wide, with wooden rings at each end, and when not extended measures about 12 inches. Sometimes the rings are weighted. The expander is procurable at any shop selling gymnastic appurtenances, and is quite cheap. It is advisable to exercise with this before using dumb-bells, in the case of weakness or delicacy of the chest. Children especially should begin their gymnastics with the expander; properly used, it cannot but benefit the most delicate child.

The following is a list of exercises that may be practised with this instrument:—

1. Grasp the rings of the expander firmly, one ring in each hand, the knuckles inwards. Hold the arms straight out to their fullest extent,

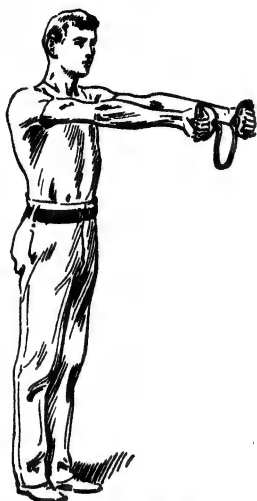


Fig 591.—Expander Exercise, No. 1.

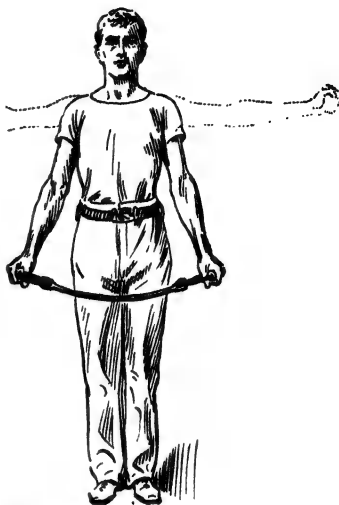


Fig. 592.—Expander Exercise, No. 4.

in front of the chest, without stretching the elastic. Then draw the hands out as far as the elastic will stretch, right and left, and bring them back to their original position, repeating the exercise at first ten times, and increasing gradually to fifty times.

2. Hold the arms as for exercise 1. Then move the right arm backwards and forwards, as far round to the right as possible, keeping the left arm quite still.

3. Reverse the previous exercise, moving the left arm only.

4. Hold the arms downwards in front of the body and just clear of it, without straining the expander. Draw the arms upwards and outwards till they are level with the shoulders; lower them to their original position, and repeat. The knuckles can be either inwards or outwards. It is as well for the sake of variety to practise in both ways.

5. Hold the arms as before. Keep the left stationary while working the right up and down, as in exercise 4.

6. Reverse the previous exercise, using only the left hand.

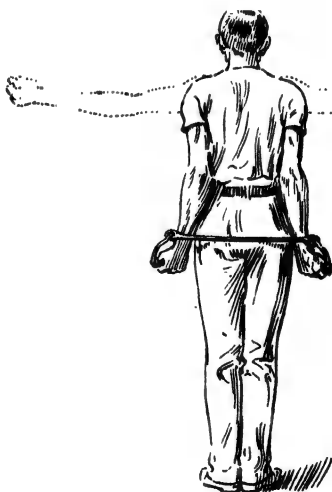


Fig. 593.—Expander Exercise, No. 7.

7. Grasp the rings with the knuckles outwards. Raise the expander and pass it over the head, lowering it at the back till the arms fall straight against the sides. Exercise the arms by raising them till in a line with the shoulders, and lowering them to their original position.

8. The position is the same as before. Expander at the back. Work the right arm only, raising it as high as possible, and drawing it towards the left, till the elastic held in both hands is perpendicular. Repeat the movement.

9. Repeat the previous exercise, using the left arm.



Fig. 594.—Expander Exercise, No. 8.



Fig. 595.—Expander Exercise, No. 10.



Fig. 596.—Expander Exercise, No. 12.

10. Hold the expander at the back of the body in a diagonal position, the right arm lowered to its fullest extent and clearing the body, the left arm bent at the elbow, the knuckles touching the shoulder. Outstretch the left arm, and bend it again, repeating the action several times consecutively.

11. The previous exercise with the right arm.

12. Hold the expander again at the back of the body, but level with the shoulders, the knuckles turned inwards, the elbows bent. Stretch the arms until they are in a line with the shoulders; then draw them back to their original position. Repeat the movement several times.

13. Hold the arms as in the preceding exercise, and work the right arm in the same way, keeping the left unmoved.

14. The previous exercise with the left arm.

15. Hold the expander at the back of the body on a level with the shoulders, knuckles inwards, elbows bent, so that the rings touch the shoulders. Extend the arms to right and left respectively, as far as possible, and bring them back smartly to the original position. Then

strike out with the right arm in an upward diagonal direction and lower the left arm; bring both hands back to the shoulders again, outstretch them horizontally, and repeat the exercise several times, reversing the positions of the arms.

16. Hold the expander in front of the body, the left arm hanging straight down and just clear of the figure. Bend the right arm, keeping the elbow close to the side, and bring the hand up to a level with the shoulders, the nails outwards. Then raise the right arm perpendicularly above the head, and bring it back to its original position. Repeat the action again and again.



Fig. 597.—Expander Exercise, No. 16

17. With the left arm perform the same action as in the preceding exercise.

18. Hold the expander in the position indicated in exercise 1. Raise it, and draw it out right and left, passing it over the head and lowering it at the back until level with the waist-line. Pass it to the front again in the same way.



Fig. 598.—Expander Exercise, No. 22.

19. Grasp the rings,

knuckles outwards. Raise the arms perpendicularly above the head. Stretch them out as far as possible to right and left, and return them to their vertical position. Repeat several times.

20. The attitude is the same as for the preceding exercise. Raise the arms, stretch out the elastic, and bring the arms down in front of the face till they are on a level with the shoulders. Raise them again, and repeat.

21. This is similar to the preceding exercise, with the difference that the expander is lowered at the back of the head instead of in front. The arms are then raised above the head, lowered again to the shoulder level, and so on.

22. Rest the left knee on the ground, the opposite leg being half raised, the sole of the foot on the ground. Hold the expander, knuckles outwards, in front of the body, keeping the elbows bent. Stretch the arms outwards and then upwards, bring the expander over the head, and lower it till level with the shoulders at the back. Then strike out with the right arm in an upward direction (diagonally), and at the same time lower the left arm until it is quite stretched out diagonally, in line with the right arm. Commence the exercise from this position. The right arm must be slightly bent, not fully outstretched. Pass the right arm round the back of the head and across in front to the extreme right,

and lower it; at the same time bring the left arm round in a curve, following the course of the right hand, and across the chest. Then pass the left hand over the head and bring it down to its original position, at the same time raising the right arm and carrying it over the head from the back to the point from which it started.

Various kinds of "developers" are in the market. These consist of rubber or elastic cords that can be extended in various ways against resistances, so as to develop the muscles.

EXERCISES WITH DUMB-BELLS.

The following gymnastics, although designed with a special view to the use of dumb-bells, may also be performed without them:—

1. Stand in the first position or attitude of "attention". Hold a dumb-bell in each hand, and bend the lower part of the arm up and down from the elbow-joint till the knuckles touch the shoulders, the upper part of the arm remaining rigid. The exercise can be varied by altering the positions

of the lower part of the arm and the hand. In one case, as the arms hang down close to the sides, the knuckles are turned outwards; in the other case they are turned inwards. Raise the arms from these positions and slowly lower them.

2. Hold the arms straight out to right and left from the shoulders. Bend the elbows until the knuckles touch the shoulder, then straighten them again. The

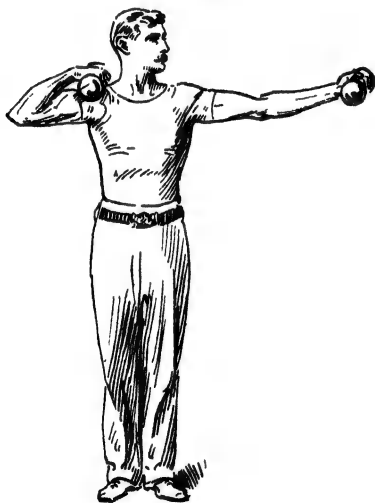


Fig. 599. — Exercise 2.



Fig. 600. — Exercise 4

action of the arms can be in harmony or opposition, *i.e.* they can be expanded and closed at the same time, or while the right arm is extended the left can be closed, and *vice versa*, the head turning with each gesture towards the outstretched arm.

3. Hold the arms as in the previous exercise, then bring the hands forward in front of the chest until they meet (keeping the elbows stiff), and back again to the original position, the movement being very broad and circular. Repeat.

4. This exercise is on the same plan as the preceding one, but the arms must be moved backwards instead of towards the front of the body, until

the dumb-bells meet at the back and the shoulder-blades are drawn together. Exercises 3 and 4 can be combined after each has been practised separately.

5. This exercise imitates, as far as the hands are concerned, the movement of swimming, and is of equal benefit if performed with or without the dumb-bells. It is particularly good for the development of the chest. Keeping the elbows close to the sides, bring the hands to the centre of the chest. Then extend the hands forward to the full extent of the arms (just as a swimmer strikes out), separate them, and move the one to the right the other to the left, the elbows becoming straightened and bending again as the hands are brought back to their original position in front of the chest. The exercise should be repeated without break several times in succession, the movement being slow and deliberate.

6. Hold the elbows close to the sides of the body, and raise the lower part of the arms until the dumb-bells touch the shoulders. Then strike out

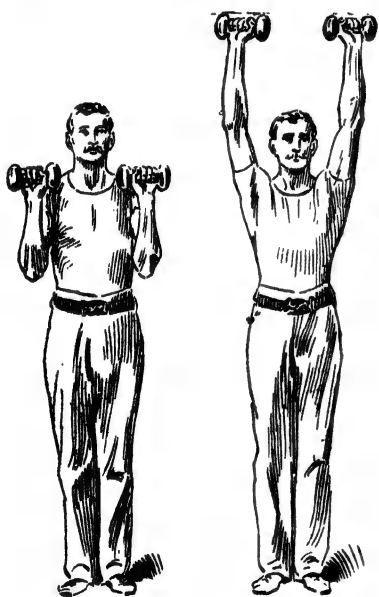


Fig. 601.—Exercise 6.

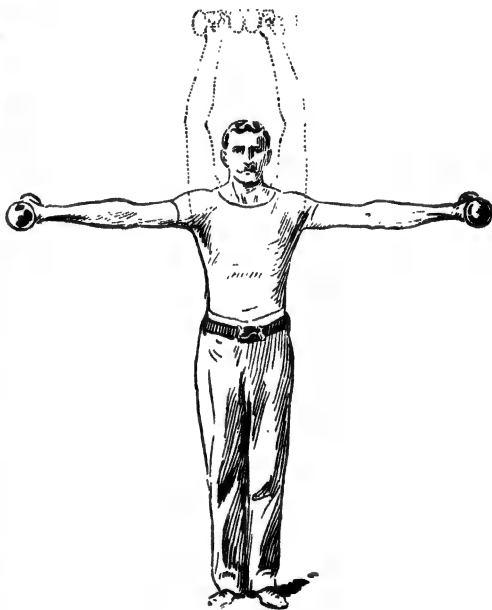


Fig. 602.—Exercise 7.

in an upward direction, stretching the arms to their full extent above the head, and bring the hands back to the shoulders. First exercise both arms simultaneously; afterwards move them in opposition, raising one while the other descends.

7. Expand the arms, to right and left, from the first position until they are level with the shoulders. Elevate them further, keeping the elbows rigid, until they are above the head and the dumb-bells meet, ball to ball, in a straight line. Then lower them slowly back to the first position. Throughout the exercise, which is of special benefit to the chest and arms, the shoulders must be pressed back for the expansion of the chest.

8. The preparatory attitude for this exercise is that of attention, the arms straight and close to the sides. Bend the arms from the elbows till the finger-knuckles touch the shoulders; straighten them upwards above the head; lower them to the second position. Strike out the arms sideways, level with the shoulders. Bend the arms till the dumb-bells touch the shoulders, the elbows being close to the figure. Repeat the movements without any pause between them.

9. In addition to the movements in the preceding exercise, after having brought the arms smartly back until the elbows touch the sides of the figure and the dumb-bells rest upon the collar-bones, strike out in a forward direction and bring back the arms again to the shoulders. Proceed as before, always introducing the forward thrust in its turn.

10. Hold out the arms in a line with the shoulders, the hands as usual grasping the dumb-bells by the bar. Then, keeping the elbows stiff, exercise the arms by a twisting gesture which brings the elbow first above and then below the arm, the movement beginning from the shoulder. It is astonishing how very much more lissome the arms will feel after this action.

11. Hold the arms as directed for exercise 10, but grip the dumb-bells in this case by the ball, not by the bar, the second ball falling below the hand. Turn the wrists round and round, in a series of circles, first from right to left then from left to right, keeping the arms rigid all the while.

This and the following exercise give great flexibility to the wrist.

12. Hold the dumb-bells by the bar, keeping the arms straight and level with the shoulders. Move the wrists only, not, however, in a circle, but inwards (towards the forearm) and outwards, or backwards and forwards.

13. Repeat exercise 3, and combine it with a breath exercise, inhaling through the nostrils as the arms are drawn back with the shoulders, and exhaling through the lips, without actually opening the mouth, as they are brought forward.

14. Hold out the arms to right and left, and swing them round and round in a circle, with first an inward and then an outward movement.

15. Stand in the first position, and bend the body from the waist to right and left alternately, until the hands

reach the knees, which throughout the exercise should remain stiff. As one arm is lowered the other must be bent upwards (inwards from the elbow). The dumb-bells, held in the hands as usual, help to balance the figure.

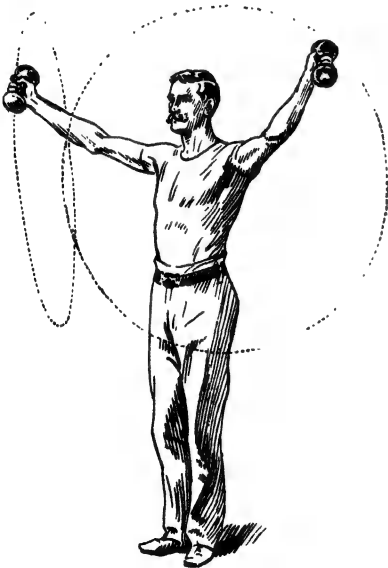


Fig. 603.—Exercise 14.

16. This also exercises the waist. Raise and keep both arms straight in front of the body, holding the dumb-bells vertically; keep the heels close together. Without moving the feet, and with as little movement as possible from the arms, turn the body from right to left and back several times in succession.

17. Raise the arms above the head, ranging the dumb-bells in a line, that is end to end, the palms of the hands being outwards. Without bending the knees, bring the hands downwards until they touch the ground, a few inches in front of the toes. Then raise the figure and bend the body slightly backwards, keeping the knees stiff. Repeat the exercise again without pausing.

18. Make a quarter-turn of the body towards the right, then take a lunge forward with the right leg, bending it at the knee. At the same time



Fig. 604. — Exercise 18.



Fig. 605. — Exercise 20.



thrust out with the left arm. Then bring both arm and leg back to their original positions. The heel of the left foot must rise from the ground as the lunge is made, and sink back again as the right foot returns. With the forward movement of the body the left arm makes a natural inclination backwards. Reverse the attitude, striking out with the left leg and right arm.

19. Balance the body evenly, the arms hanging down close to the sides. Then raise one leg and shoot it out forwards, and bring it back sharply from the knee. Repeat the movement several times without pausing. Reverse the exercise by performing the action with the other leg.

20. The attitude for this movement resembles the first position, but the feet, instead of being close together, are about 8 inches apart. Bend the knees and lower the trunk almost to the ground, resting the dumb-bells upon the floor to right and left. Rise gradually until the body is straightened and balanced upon the toe-balls. Sink again and rise. The breath,

according to the rule already set down, should be inhaled as the body is raised, exhaled as it is lowered.

21. Stand again with the feet 8 inches apart. Elevate the arms above the head, and, starting from this position, bend the knees until they are within a few inches of the ground, the arms with the downward movement being bent at the elbows and the dumb-bells brought to the collar-bones. In rising again stretch out the arms above the head.



Fig. 606.—Exercise 21.



Fig. 607.—Exercise 22.

22. In preparing for this exercise place the feet about 10 inches apart, and bend the arms from the elbows (which remain close to the figure) until the dumb-bells rest upon the shoulders. Then lunge forward (as in fencing), first with the right arm and then with the left, advancing the hand to a point slightly above the shoulder-level. As the right arm is straightened, the left leg should be stiffened and the right slightly bent, the reverse of course being the case when the left arm is thrust forward. With the action of bending the leg the foot should rise on the toe-balls.

INDIAN CLUB EXERCISES.

For the most part Indian club exercises consist of rotary movements. The clubs, which are of wood and shaped like a slender elongated pear, vary in weight and size, and should be selected to suit the strength. The beginner should use light-weight instruments.

It is usually more convenient to exercise the arms singly at first, as rotary movements performed by both arms simultaneously cause the beginner some little confusion. The early exercises with the clubs consist of half-circular movements, which are not so difficult as those which describe the full circle.

The attitude to be assumed, unless otherwise stated, is again that of attention, the clubs being held one in each hand, the thumbs and fingers outwards.

The great art is to maintain a perfectly regular even swing. The true rhythm is everything. All the movements must be free from jerkiness and

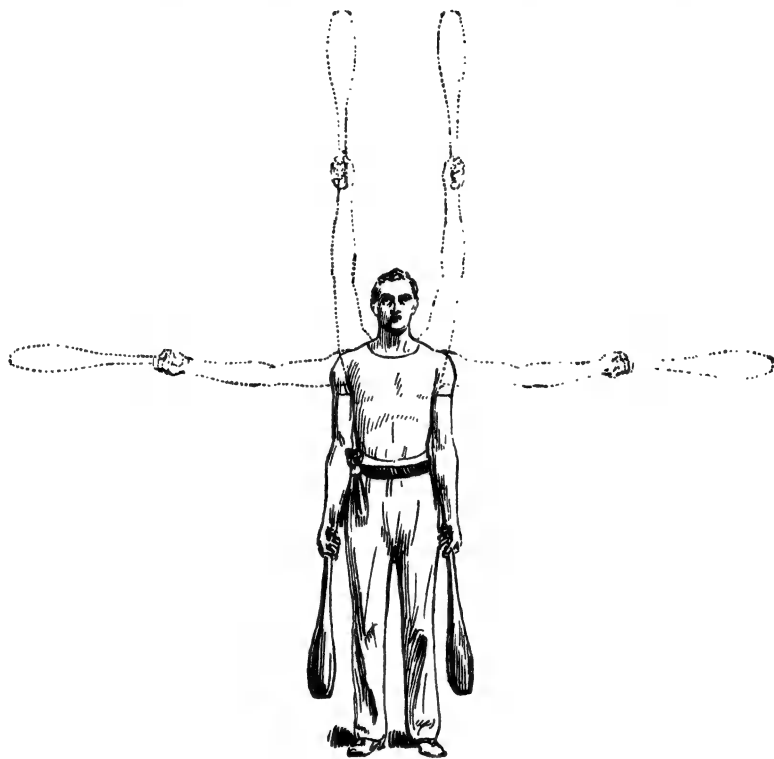


Fig. 608.—Exercise 1.

irregularity, otherwise the exercises will not assist the development of grace in gesture by loosening the joints and rendering action easy.

In the simplest exercises—those, therefore, which it is advisable to begin with—the arms remain straight. In more advanced exercises they are bent.

1. Hold the figure erect, the arms hanging straight and close to the sides, club in each hand. Raise the arms until they are level with the shoulders and pointing to right and left respectively, then move them upwards in a diagonal direction until they are vertical. Reverse the movements, and bring the arms down to their original position. Slowly count ten between each change of attitude.

2. Stretch out the arms to right and left in a line with the shoulders, move them back as far as possible, then round till they point straight out in front of the body, back again, and so on repeatedly. Keep the elbows rigid.

3. Swing the clubs forwards from the first position, until they are well

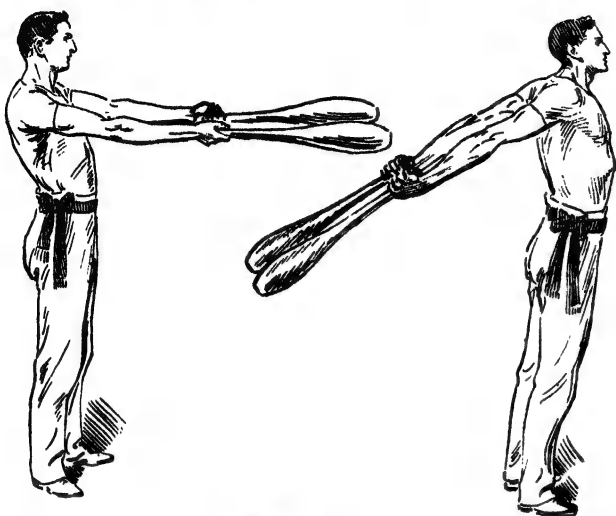


Fig. 609.—Exercise 3.

in advance of the body. Then swing them backwards, and continue these movements, keeping the elbows stiff.

4. Swing the clubs in a circular direction so as to meet in front of the body and at the back. The arms must be held as far as possible from the body.

5. Bring the clubs with an even swing forwards and upwards until the arms are ver-

tical, then lower them. This exercise can be varied; both arms can be worked in harmony, or the right arm may swing upwards while the left descends. Performed in the latter way the exercise encourages independent action of the arms.

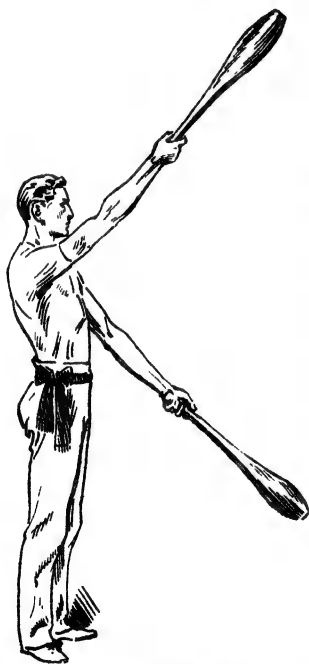


Fig. 610.—Exercise 5.

6. Swing the right arm round and round fifty times, then the left, then both arms, moving the body as little as possible. The swing should describe at one time an inward, at another an outward circle.

7. One of the prettiest of the club exercises is the "double circle". Hold the arms straight out to left and right, level with the shoulders. Move the right arm in such a way as to describe a circle, passing it in front of the body. When the arm has described three parts of the circle, or is straight above the head, move the left arm in the same way, always keeping the right arm the same distance in advance. Vary the movement by beginning with the left arm, the right following.

8. In this exercise both arms describe a circle simultaneously but in opposite directions. Hold the arms as for the preceding exercise.

Move the right arm upwards over the head, downwards so that at one moment it is level with the chest (the club pointing in the same direction as the left arm), and back towards the right. As the

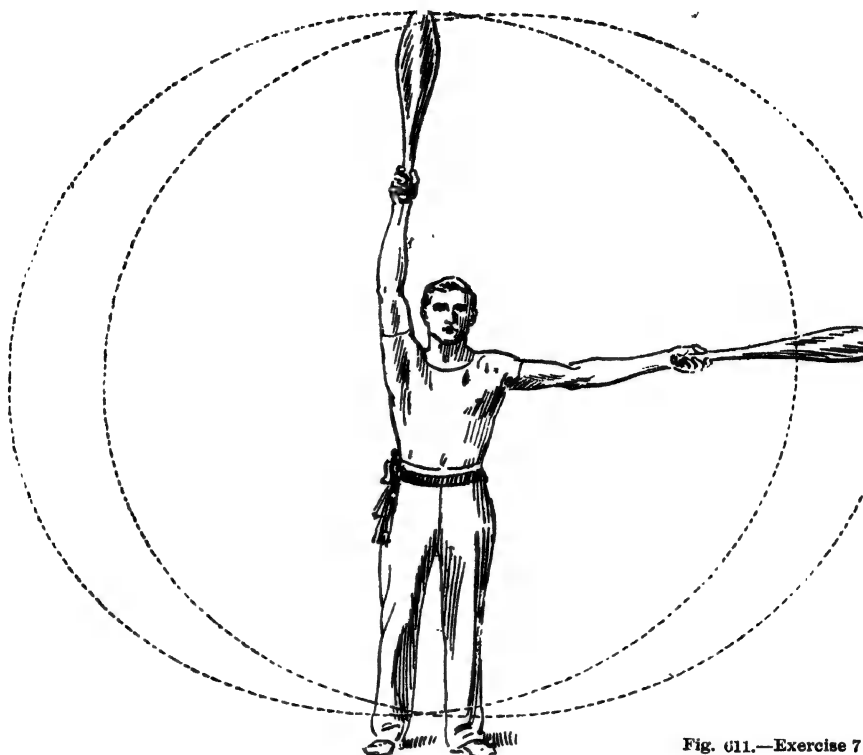


Fig. 611.—Exercise 7

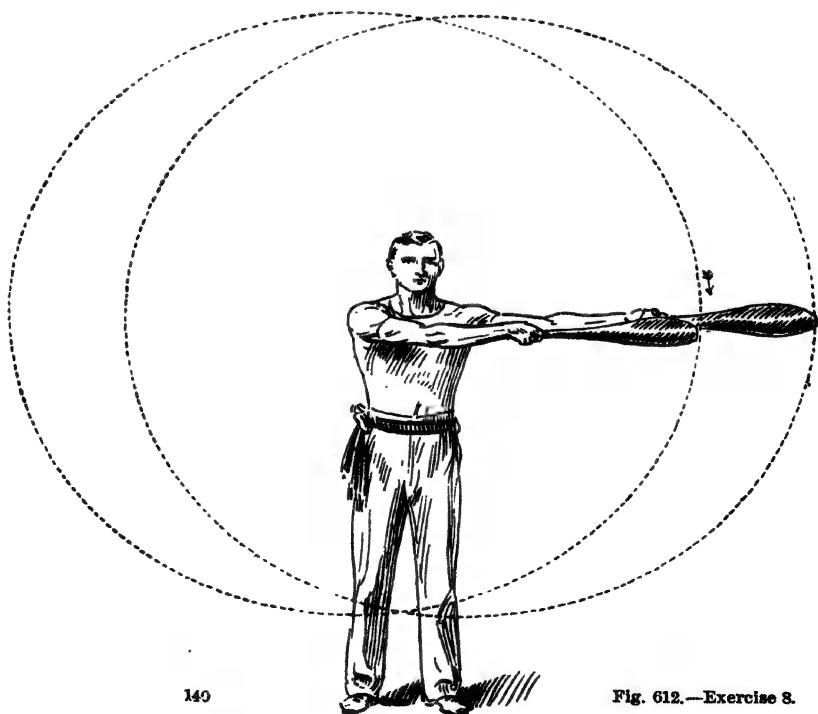


Fig. 612.—Exercise 8.

right arm crosses the body in front commence to move the left arm upwards over the head, round to the front and across the body. The exercise must be practised very slowly at first until the rhythm has been mastered and the arms work easily together.

9. This is an exercise that in the first instance should be practised with one arm at a time. Afterwards both arms can be worked together. In the former case the inactive arm hangs straight down at the side. Take a club in the right hand, and, raising the arm, bend it over the head, the club thus hanging down just in front of the left shoulder; this is the preliminary attitude. In beginning the movement raise the right arm slightly, so that the club "clears" the shoulder. Then bring the arm down at the back of the head and circle it round to the front till it resumes its original position. Repeat several times. The left arm must be

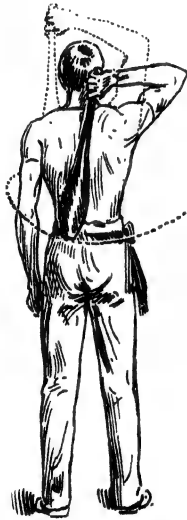


Fig. 613.—Exercise 9.



Fig. 614.—Exercise 13.

exercised in the same way. Throughout the action the figure must remain upright.

10. This exercise is similar to one of the movements in exercise 6. Swing the arms round simultaneously, describing an inward circle. As they are brought round to the front, rise on the toe-balls.

11. This exercise is for the benefit of the wrists. Hold the arms close to the figure, and then bend them upwards from the elbows. The wrists must be bent from side to side, the arm from shoulder to elbow remaining quite stiff and close to the figure.

12. This is another wrist exercise. Hold the arms in the same position as for the previous exercise, but with the elbows away from the figure.

Twist the wrists round and round, moving both wrists to the right together and to the left together. Short clubs should be used for this exercise. Those who have only long clubs should exercise each wrist singly.

13. In this movement one club only is used. Grasp the handle at the part nearest to the body of the club with the right hand, palm uppermost, and nearer to its end with the left hand, the wrist bent, the fingers turned in towards the body and ultimately (as the handle lies in the palm) closing over the handle. Place the right leg in advance of the left, and swing the club round in front of the body, over the head, and back to the starting-point. The knees should be stiffened during the upward motion and relaxed as the arms pass round at the back of the head from left to right. It will be understood that, the club being grasped in the manner described, the body of it naturally points to the right; the first "swing", therefore, takes a left-hand direction. Reversing the position of the hands, the body of the club then pointing towards the left, the first "swing" will be directed to the right. The exercise should be practised in both ways.

WAND EXERCISES.

The wand used in gymnastics varies in length and thickness, but is always light in the hand, the object of the wand exercises being to produce grace of movement rather than to develop muscle. As a rule, the wand is about 4 feet or 5 feet in length, merely a straight, rounded piece of wood about $\frac{3}{4}$ inch in diameter.

Some very beautiful exercises can be performed with the wand. As with other gymnastics, the first position to be observed is that of "attention" (which has already been described), the hands as they hang down close to the sides holding the wand, which passes in front of the body.

1. Standing in the "first position" grasp the wand firmly towards the ends with both hands, the knuckles outwards. Raise the arms slowly (inhaling deeply at the same time) until they are vertical. Then lower them slowly (exhaling with the downward movement), and repeat the exercise several times in succession. The elbows should be kept rigid.

2. Raise the arms, as in exercise 1, above the head. Count ten, and then lower them as far as the shoulders, bending the elbows and passing the wand in front of the face. After ten seconds raise the arm again. Repeat the exercise in this way ten or a dozen times, then vary it by omitting the pause between the movements.

3. Hold the wand as before, knuckles outwards, arms straight down at the sides. Raise the arms above the head, then lower them until the hands point in front of the shoulders. Pause a second; shoot the arms to the right until the right arm is fully outstretched; bring them back until the hands are again in front of the shoulders; shoot them out to the left as far as possible, and bring them back to the same position.

4. Proceed at first exactly in the same way as for the previous exercise. After the hands have been struck out to right and left, raise them above the head and bring them down till the wand is level with the chest (elbows bent), then proceed as before, always introducing the upward movement after the wand has pointed to right and left.

5 Raise the arms slowly and deliberately until they extend as far as possible above the head, then lower them over the back until the wand is level with the shoulders. Once more raise the arms and pass the wand to the front, bringing it down again level with the shoulders. Repeat the exercise, always



Fig. 615.—Wand Exercise 2.

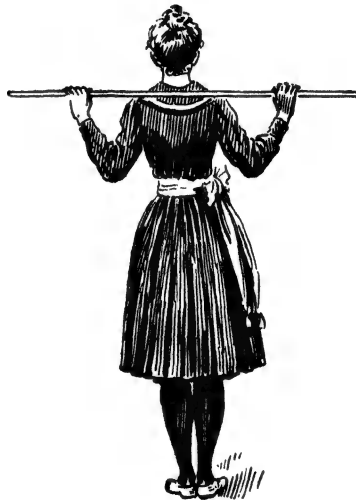


Fig. 616.—Wand Exercise 5.



Fig. 617.—Wand Exercise 8.

bearing in mind the proper management of the breath. The elbows should be rigid.

6. Pass the wand over the head, as in the preceding exercise, until it rests on the shoulders. Elbows bent. Then strike out to the right and left in turns, extending to its full the right or left arm as the case may be.

7. The general attitude is that of attention, but the hands are held farther apart towards the ends of the wand. Raise the arms slowly above the head, lower them at the back of the neck as in the previous exercise, and press downwards until the arms are straightened. At first the exercise will be performed with a sort of "jointed" movement during the last stage, the wand taking a diagonal direction and a great deal of jerkiness being noticeable. But practice will remedy these defects. The shoulder-blades must be drawn together, and the arms—to prevent their taking the diagonal course referred to—must be unfolded from the elbow and pressed outwards as the "turn" is accomplished which straightens them. The exercise must be practised very carefully, especially the latter part, which must

on no account be hurried. The wand should be raised again, and passed over the head to its original position.

8. Hold the wand across the chest but slightly in advance of it, the arms bent, the hands wide apart. Press the wand over towards the left, raising the right arm and lowering the left. Continue the movement until the wand is parallel with the left side and close up against it. Repeat the exercise, reversing the direction of the wand, that is to say, pass it to the right, the left hand crossing the body. Keep the waist stiff.

9. Hold out the arms straight in front of the body, grasping the wand firmly. Without changing the position of the arms, bend the body from the waist (the knees remaining stiff) until the wand almost touches the ground. Rise slowly and repeat.

10. One of the most difficult of the wand exercises is that known as "marching". It can only be accomplished after the muscles of the body, and of the arms in particular, have been thoroughly developed. Grasp the wand with both hands, one hand above the other, resting one end upon the ground, then stretch out the body far away from the wand. Walk round the wand, passing one foot over the other. The strain upon the muscles is very great, and beginners should practise the exercise cautiously.



Fig. 618.—Wand Exercise 10.

11. The exercise is similar to exercise 8, except that the body moves with the wand, the waist bending over to right and left as far as possible.

12. Raise the wand above the head, keeping the arms in a vertical position; turn alternately, from the waist, to left and right. The feet must not move.

13. Hold the arms straight out in front of the body, the hands grasping the wand. Move the body from the waist only to right and left, the feet, as in the previous exercise, remaining still.

14. Hold the arms and wand as in the last exercise. Balance the body upon one leg, keeping the other bent backwards; then stoop gently as low as possible and rise again. Exercise both legs in the same way.

15. Hold the arms up above the head, grasping the wand near its ends. Make a slight movement backwards with the arms, then incline them to the left behind the head; bring the right arm over the head and round to the front, the left following. Continue the movement so that the left arm

passes right across the body and round in a circle at the back of the head. The waist should be stiff.

16. This exercise is similar to the previous one, but on a grander scale, and the circle described is very much larger. Hold the arms straight out in front of the body, the hands grasping the wand wide apart. Then describe a circle by moving the arms towards the right, passing them across the back (the left arm over the head), and round the front (the right arm over the head). The body should accompany the movements, and be swayed in a circle from the waist.

MUSIC.

INTRODUCTION.

Music in the home is an unfailing pleasure, but it requires careful and long-continued study to gain even moderate proficiency. All intelligent children should be taught music as soon as they are able to read, but in most cases it is not desirable to begin the study of any instrument before the age of six years. The cultivation of the ear and of singing may quite well begin even before that age, provided that there is no straining of the voice. For these purposes a course of tonic sol-fa is useful. When it is clearly seen that there is no natural aptitude for the study, it is a mistake to force it on an unwilling pupil. Furthermore, no child should be encouraged to make music his profession unless he shows special gifts. It is difficult for a third-rate musician, in these days of keen competition, to make a comfortable living. Everyone studying music should learn to play the piano to some extent, just as he should cultivate whatever voice he has been favoured with by nature. But where there are several musical members in a house, it is a great advantage for all, and it adds much to the charm of the home, if they learn different instruments. Next to the piano the instrument which is most useful is the violin, and after that the violoncello. Another violin or a viola might then be added to the family orchestra, and, if still more players are available, one of the wind instruments, such as the flute or the clarinet, might be studied.

Instruments like the harmonium, harp, banjo, or mandoline do not demand such serious study, unless from a professional player, and may be taken up in addition as the fancy suggests.

SINGING.

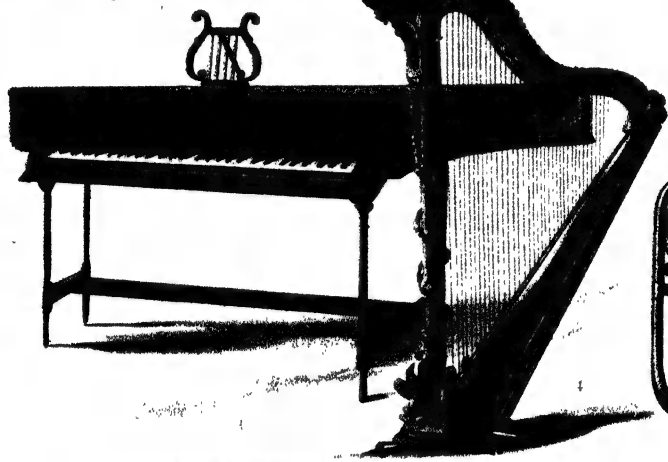
Singing may be encouraged almost from infancy, but regular instruction, if not continued for more than ten or fifteen minutes at a time, may begin about the sixth or eighth year according to the progress of the child. Boys especially should be carefully watched that they use only the head voice for the higher notes, and all rough shouting should be discouraged. Training in a good choir under a competent teacher is invaluable for a boy



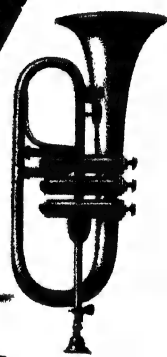
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from the age of about ten to sixteen years. The number of "methods" is bewildering, but they all aim at beauty of tone, evenness of quality throughout the scale, and flexibility of voice. It has been said with some truth that if everyone would practise softly, slowly, and easily, nearly everyone would sing sweetly. Clear enunciation, giving special attention to the consonants, and intelligent expression, so as to bring out the meaning of the words, are absolutely necessary if a song is to be made intelligible to an audience. The playing of accompaniments is an art in itself. The player must entirely subordinate himself, and be able to follow the shading and any variation in tempo which the singer may introduce. He must also be ready to cover any fault and to help at any difficulty, so as to give perfect confidence to the singer.

Randegger's *Singing* (Novello) and the Exercises by Behnke and Pearce (Chappell) will be found useful. Concone's *50 Leçons de Chant* (Augener) are excellent as exercises and pleasant to sing. Manuel Garcia's *School of Singing* (Ashdown) has a wide reputation.

THE PIANOFORTE.

Of all musical instruments the piano is the most common. It dates back to the first half of the eighteenth century, and was preceded by a variety of stringed instruments, such as the clavichord, the virginal, the spinet (see Plate, fig. 3), and lastly the harpsichord, in shape like a grand piano. These all had keyboards resembling that of the modern piano, but they differed in their methods of producing the tone.

Choice of a Pianoforte.—In choosing a piano there are five points which present themselves. These are tone, touch, durability, size, and price. The tone must be as even as possible throughout the entire scale, with good sustaining or carrying power. The touch should be fairly light, with good repetition. It should not be possible to press a key down without hearing a sound, and the sound should cease as soon as the finger is removed. The best guarantee of durability is to select a reliable maker. The size, whether grand or upright, and the colour of wood must be regulated by the room in which the instrument is to be placed. Lastly, the purchaser, before beginning to select, should know clearly the price he is prepared to pay.

Fashion and Pianofortes.—The extensive compass of the modern piano is to some extent a matter of fashion. From 4 octaves it has grown to 7 octaves; and on some of the later instruments yet more notes are added, extending the range to $7\frac{1}{4}$ octaves. The extreme notes, high and low, are little used, but they add to the resonance of the instrument. Rosewood is most generally used for the case; walnut wood is usually dearer. The more expensive instruments, both grand and upright, are magnificently ornamented with artistic carving, painted panels, and mar-

queterie, and are real works of art. An ottoman-shaped seat is generally used instead of the old-fashioned music-stool.

Various Kinds of Pianofortes.—The pianette, the smallest form, can be purchased in plain deal case from £15 or £20, this class of instrument being suitable for school-room work. The cottage piano is the next size, and ranges in price from about £20 to £100. Then there are the oblique, and the oblique grand, which are rather more expensive. They are similar in appearance to cottage pianos, but differ in the arrangement of the strings. A grand costs from about £70 to £300. Large discounts are usually given for ready money.

Second-hand Pianofortes.—Intending purchasers should be warned against very cheap instruments. Second-hand pianos are often little inferior to new ones, but they must be bought with care, or through a reliable dealer. Advertisements frequently appear in the daily papers, offering for sale “pianofortes equal to new”. Sometimes they are the property of “a gentleman about to sail for China”, or of “a lady about to rejoin her husband in Bombay”. These are usually old pianos, highly polished, made to look like new by processes known to furniture restorers. If any tone at all remains, it cannot be expected to last more than a few weeks, or, at the most, months, the reason being that the “action” is completely worn out. It is well known that a regular trade is carried on in this rubbish.

Management of Pianofortes.—It is important that the piano should be rightly placed—not touching an outer wall, not too near the fire, and not exposed to a draught. Heavy articles of furniture and thick carpets and curtains are unfavourable to the sound. Pianos are always affected by sudden changes of temperature, and damp is their greatest enemy. The proper temperature is about 60°. They should be occasionally left open, as, without light and air, the keys become yellow and discoloured. The key-board should be thoroughly dusted every day. Regular tuning is essential. Once in three months is usually sufficient, but if from any cause the instrument becomes out of tune, it is better to have an extra tuning than to allow the mischief to go on. The charge for a single tuning varies from 3s. to 7s. 6d. But an annual arrangement is usually made at reduced terms.

Practising.—Young beginners should not practise for long at a time. An hour a day, divided into two portions, will suffice for the average child of twelve; the period may be increased gradually, depending on the age and capacity of the learner and the object in view. It is worse than useless to practise when the performer is either mentally or physically fatigued.

A naturally good touch is a rare gift, almost as rare as a good voice. But it can be acquired by persevering and intelligent practice—principally by the practice of scales. It is useless to rush through scales or exercises in a perfunctory fashion; they should be played very slowly, every note listened to with the same attention as would be given to an elaborate

piece of music. The position of the hands should be carefully observed; they should be held quite evenly, the wrists being neither raised nor depressed, and only the fingers bent; finally, there should be no unnecessary movement of the arms.

Exercises for Beginners.—The number of Pianoforte Tutors is very great. Provided that the teacher be competent—and a teacher is almost a necessity—it is of comparatively little consequence what particular book he uses. But the Tutors by Sydney Smith (Ashdown) and C. Gurlitt (Augener) may be recommended.

Studies.—For technique, Plaidy's *Technical Studies* (Chappell) or Germer's *Technics of Pianoforte Playing* (Bosworth) are good, for they leave few difficulties untouched. Many useful hints and excellent exercises may be found in *The Leschetizky Method* by Marie Prentner (Curwen & Sons). Along with these purely technical exercises some of the following studies may be used: Czerny's *101 Exercises*, Bertini's *Twenty-Five Studies* (op. 29), Czerny's *School of Velocity* (op. 299), Loeschhorn's *Progressive Studies*, and Bach's *Inventions*.

More Advanced Studies.—Afterwards some of the following: Czerny's *Art of Finger Flexibility* (op. 740), Cramer's *Studies*, Clementi's *Gradus ad Parnassum*, will lead up to more difficult compositions, such as the studies by Moscheles, Henselt, or Chopin. Franklin Taylor, in his *Progressive Studies* (Novello), makes an excellent selection of many of the foregoing works arranged so as to meet special difficulties. Ridley Prentice has also in *The Musician* (Curwen) a valuable guide to pianoforte students, in which pieces and studies are arranged in six grades of difficulty. Finally the serious student should remember Schumann's advice, and let Bach's *48 Preludes and Fugues* be his "daily bread".

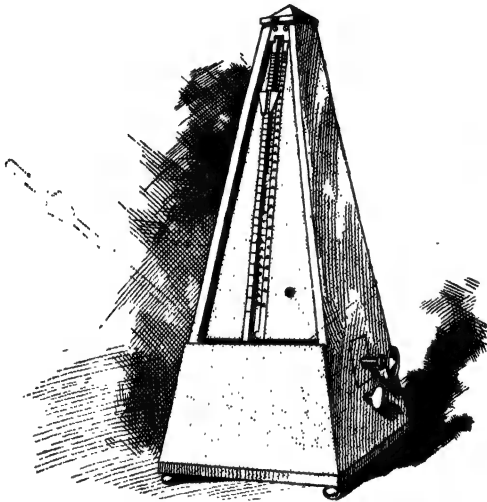
Reading Music.—The power to read music fluently is to some extent an innate gift. Playing with others, either with four hands on the piano, or with another instrument, such as the violin, is invaluable. A knowledge of harmony will help, but the only sure way to succeed is to practise regularly new and not too difficult music at a moderate speed.

Loud and Soft Pedals.—Much misapprehension exists as to the use of the (so-called) loud pedal. Loud pedal is a misnomer. Its effect is merely to sustain the notes, consequently it is often required in *pianissimo* passages. Young players usually delight in the pedal, and nervous pianists are apt to have recourse to it when they find themselves in difficulty. A simple rule is to let the pedal rise when the chord changes. The soft pedal is almost as much misunderstood; the performer should depend solely on touch for *pianissimo*, except when a special effect is intended by the composer. This effect is indicated by the words *una corda* (one string), and the soft pedal should be raised again at the words *tre corde* (three strings).

Dance Music.—There is an art even in playing dance music. The first requisite is perfect time, and the accents, especially in the bass, should be well marked. There are endless writers of dance music, but Strauss (father and son) and Waldteufel may be specially mentioned.

The Metronome.—The metronome is a great help to playing in time, and also gives a decided style, but it should not be constantly used, and care should be taken when practising to set it at a rate slow enough to prevent the recurrence of mistakes. Bell-metronomes are the best, as the bell sounding indicates the commencement of each bar. They can be bought for a guinea or less.

Classical and Romantic Music.—The word "Classical" is used in two ways. It is applied first to any music of the highest merit, in whatever style it may be written. The best test of this merit is the length of time a composition has survived and held its place in the estimation of mankind.



g. 619.—Metronome

It may be an opera, a march tune, or a simple ballad. In another sense "Classical" is applied to music written in certain well-defined forms, such as the Sonata or Fugue, and as opposed to "Romantic" compositions, in which the fancy has more liberty, and form is not the first consideration. There should be no opposition between "Classical" and "Popular" music, because all classical music should be popular, and it would be well if all popular music were classical.

All learners of average intelligence should be taught the first principles of harmony, the formation of chords, the laws of modulation, and the general structure of works by good writers. For this general musical knowledge no better book can be recommended than Banister's *Music*, one of the Cambridge text-books.

A sonata, in modern language, is a work in separate movements, generally in three or four, developed according to certain laws. (See Hadow's *Primer on Sonata Form*—Novello.) When the same form of work is written for more than two instruments, it is named accordingly trio, quartet, quintet, &c. For a solo instrument with orchestra, it is called a concerto. When the sonata form is extended, and the work is written for an orchestra, it is a symphony.

A fugue is a work in which a subject given out by one part is answered or imitated successively by other parts, with modifications and embellishments. The word is from *fuga* (a flight), because the parts seem to fly from or spring out of one another. John Sebastian Bach was the great master of this style of writing, and his 48 Preludes and Fugues are indispensable to every student of music, both as practice and as

ascertained that there is no catch under the key-board to keep it in place; and then with a piece of ordinary black-lead rub briskly over the various bits of felt connected with the pedals—by pressing on each pedal in turn one will immediately discover which are the pieces so connected. If this does not have the desired effect, then the pins are at fault, and a very small bit of lard must be put on each pin just where it runs through the wood. Indeed one good rule to remember when dealing with the piano is to apply black-lead to the felt and lard to the wire part of the instrument, with the exception, of course, of the strings themselves.

After the piano has received a certain amount of wear and tear, no appreciable effect is obtained by putting down the loud pedal. The material attached to the dampers has lost its softness and become hard and flat, so that it no longer fulfils its duty. With a sharp pen-knife it is not difficult to pick at the stuff and bring it back to something like its first fluffy condition.

When the pedals get loose, it is a simple matter to screw them up. Remove the base board previously mentioned, and it will be seen that they are kept in place by a big screw, standing point upwards and terminating in a small block of wood which serves as a nut. Turn the block, so that it winds down the thread of the screw, and the pedals will tighten proportionately.

Hammers occasionally break, and if the stem itself is broken, outside assistance must be called in; but if the breakage occurs at the head—a more frequent accident—replace the broken piece in its original position with the help of a tube of "Seccotine". This is sold by any fancy stationer, at the moderate sum of sixpence a tube. Glue may be used for the purpose, but, owing to its convenience, many tuners prefer "Seccotine".

Much useful information will be found in Dr. Fisher's *Construction, Tuning and Care of the Pianoforte* (Curwen & Sons), price 1s. 6d.

THE VIOLIN.

The violin (see Plate, fig. 2) has been called the "King of Instruments". It demands distinct musical gifts, and is much more difficult than the piano for the beginner. The first requisite is great correctness of ear; the second, dexterous manipulation, only to be attained by diligent practice, for the technical difficulties are very great. The violin has four strings (G. D. A. E.), tuned in 5ths. The intermediate sounds and those higher than the 1st string are obtained by stopping the string with the finger, and so shortening the length of the vibrating portion.

There are many styles of teaching, scarcely any two professors having the same method. The study of this instrument should be commenced at a very early age. A child of seven, musically gifted, is not too young

to begin. In later life it is almost impossible to acquire the necessary elasticity of finger, and the ear cannot too early be accustomed to observe the different tones.

Violins are made in different sizes, such as quarter size, half size, three-quarter size, ladies' size, and full size, to suit players of different ages. A cheap instrument may be bought for a few shillings; one of a better quality may be had from £1 to £2, 10s. A good Cremona violin may cost hundreds or even thousands of pounds, but that is usually regarded as a "fancy" price, for a really good instrument may be bought from about £4 to £16. As regards accessories, bows cost from 2s. to £4; resin, 1d. to 6d. Each one of the four strings may be had separately from about 3d. for a first, up to 3s. for the finest quality of fourth. Cases cost from 5s. to £2. Music-stands from 3s. 6d. upwards.

The literature of the violin, like that of the piano, is very rich. It is only possible to mention a very few of the chief players, who were also composers for their instrument. Such were: Corelli, Tartini, Viotti, Alard, Baillot, de Bériot, David, Molique, Paganini, Rode, Sivioli, Spohr, Vieuxtemps, and Wieniawski.

Amongst the best-known violin methods are those of Spohr (Boosey) and David (Breitkopf), as well as that of the Paris Conservatoire by Kreutzer, Rode, and Baillot (Breitkopf). An almost inexhaustible store of the finest violin music is found in combinations with other instruments. (See the paragraph on "Concerted Music".)

THE VIOLA.

The viola is larger than the violin. It has four strings (C. G. D. A.), tuned a 5th below the violin, and it takes the third or tenor part in the string quartet. It is therefore often called the tenor violin. To save many leger lines its music is chiefly written in the alto clef. Very little solo music has been written for this instrument, but there are many duets for piano and viola.

Laubach's *School* and Bruni's *Method and Studies*, both published by Augener, may be recommended. Violas, like violins, vary in price from a few shillings up to many pounds.

The first and second strings are the same as violin seconds and thirds. The third and fourth strings cost from about 4d. up to 2s. or 2s. 9d. each according to quality.

THE VIOLONCELLO.

The violoncello (see Plate, fig. 8) takes the bass part in string trios and quartets. It is also a very fine solo instrument, and touchingly

expressive in the hands of a sympathetic performer. It is a charming addition to the piano as an *obligato* accompaniment to songs. The finest violoncellos can be obtained only at exorbitant prices, but instruments sufficiently good for ordinary use can be bought from £3 to £15. It has four strings (C. G. D. A.) tuned an octave below the viola, and costing from about 6*d.* for a first, up to 8*s.* for the finest quality of fourth.

One of the best instruction books is that of Kummer (Ashdown), and Dotzauer's *Studies* (Peters) is recommended.

THE HARP.

The harp (see Plate, fig. 4) is in appearance the most graceful of all instruments. It is not very much in use, doubtless on account of its costliness, and also because the strings require constant care and attention. It must never be exposed to damp or draughts, and when not in use should be kept covered.

Much interesting music has been written for the harp, amongst the most celebrated composers being Parish-Alvars, Oberthür, and John Thomas. The harp is a charming accompaniment to the voice, and very effective in duets with the piano. Bochs's *Method* and *Studies* (Ashdown) are well known.

The more expensive instruments, costing from £100 upwards, are richly ornamented; artistic carving, rare woods, mother-of-pearl, and ivory being employed in their decoration. A single set of strings costs from about 15*s.* up to £2, 18*s.* according to quality. Handsome leather covers may be obtained for £5, 5*s.* Harps of German manufacture may be bought from about £7, 10*s.* to £60.

THE GUITAR.

The guitar (see Plate, fig. 7) is quite a drawing-room instrument, and is a pleasant accompaniment to the voice. There are many technical difficulties connected with the instrument; and for brilliant solo-playing long-continued study is necessary. But when undertaken merely with a view to playing accompaniments, a course of twenty-four lessons might be sufficient if the student were gifted with a fairly good ear. Duets for guitar and mandoline are frequently played, and are very effective, the tones of the two instruments blending well together. The chief disadvantage of the guitar is, that unless it is kept in a perfectly dry atmosphere the strings are liable to break.

The greatest care is essential in tuning the guitar. The right method is clearly explained (with illustrations) in Madame Sidney Pratten's

admirable work *Learning the Guitar Simplified*. In this book all difficulties are explained, and full directions are given as to the best way of practising. It contains all the exercises necessary to be learnt, short pieces, and songs. The cost of a guitar varies from about 10s. to £10, the more expensive instruments being richly ornamented. There are French, German, and Spanish varieties. Strings cost about 2s. per set; leather cases about £1, 5s.; and cloth cases, 10s. A waterproof canvas bag (perhaps the best kind of case) may be obtained for 9s. 6d.

THE MANDOLINE.

The mandoline (see Plate, fig. 1) has lately become a favourite with musical amateurs. The form is graceful, and the more expensive instruments are elaborately ornamented with tulip-wood and pearl-inlaid tortoiseshell. The Neapolitan mandoline, which is the commonest form, has four pairs of strings, tuned like the violin in fifths. These are struck with a plectrum. Many charming Italian songs have been written specially for it. There are also good solos. Italian national airs are particularly suited to this instrument. It is not difficult to learn, especially for a violinist.

Genuine Italian mandolines cost from £2 to £14. Those made in Germany can be had from 12s. to £1. Plectra and sleeve guards may be bought for a few pence; strings cost from about 9d. to 3s. per dozen; and cases about the same as for guitars.

THE HARMONIUM.

Anyone able to play the piano can learn the harmonium without much difficulty. The full compass is five octaves on the key-board. The sound is produced by the action of thin plates of metal, technically called "tongues", which are thrown into vibration by wind from the bellows. There are many varieties of this instrument. The "percussion harmonium" is preferable for secular music, as it is constructed so that rapid passages can be performed with clearness. The harmonium without percussion is more suitable for sacred music.

The lowest-priced harmonium has only one row of vibrators. The more expensive are constructed with six, seven, or even more rows of vibrators. The larger ones are fitted only for large halls and churches.

One advantage of this instrument is its comparative cheapness, prices ranging from 6 to about 50 guineas. There is much excellent music arranged for the harmonium—chants, psalm and hymn tunes, anthems, and voluntaries. Harmonium and piano duets are exceedingly effective. The principal writers for the instrument are Rimbault, Engel, and Lemmens. There is a good tutor by Hall (Novello).

AMERICAN ORGAN.

American organs are in many respects similar to harmoniums, look equally well in a drawing-room, and are suited to the same style of music. The larger instruments are fit only for churches and public rooms. Prices vary from £6 up to about £400 for the largest church instruments. There are good tutors by Dr. Stainer and by Dr. Bridge.

THE FLUTE.

The flute (see Plate, fig. 6) is perhaps the most useful of the wind instruments for the home. Moderate skill may be acquired with less labour than with the piano or violin. There are many duets for flute and piano; those of Kuhlau, who has been called the "Beethoven of the flute", are specially worthy of study. The flute is made chiefly of wood, but ebonite, silver, or gold instruments are also made. Most players now use the "Boehm Flute", so called after its inventor, as its mechanism gives better intonation and more power.

There is a smaller flute, called the piccolo, which plays an octave higher than the notes written. It is very shrill, and is chiefly used in the orchestra and in bands.

Flutes vary in price from about 3s. up to £21, according to the mechanism and the material used. A silver flute will cost about £30, and an 18-carat gold instrument nearly £200.

Nicholson's *Preceptive Lessons* is highly recommended.

OBOE, CLARINET, AND BASSOON.

These are all reed instruments in which the sound is produced by a piece of thin cane, called the "reed", held between the lips. They are not often heard in the home, but much charming chamber music has been written for them, in various combinations with the piano and strings, by the great composers.

Clarinets cost from about £2, 15s. to £23, oboes from about £3, 10s. to £21, and bassoons from about £12 to £25. The reeds vary in price from about 1s. 6d. to 5s. each.

BRASS INSTRUMENTS.

Brass instruments are, as a rule, too powerful in tone for an ordinary room; but the French-horn, sax-horn, (see Plate, fig. 5), and cornet are

sometimes played alone with piano accompaniment, as well as in many combinations with other instruments. The prices of horns and cornets vary from about £1, 10s. to £18.

THE BANJO.

The banjo (see Plate, fig. 9), though not an instrument of the highest order, claims a few words, as it is greatly in request for an accompaniment to comic songs and negro melodies. It is easily learnt by anyone with some knowledge of music. There are many varieties, with from five to nine strings, with veneered or walnut handles, and with brass or nickel-plated fittings. Prices vary from about 6s. to 15s. A more expensive kind, made of superior wood with German silver frets, costs from £1 to £4.

THE ZITHER.

The zither is a small portable instrument. It consists of a low, flat sound-box, over which are stretched a large number of strings of various materials. It is plucked with a plectrum attached to the right-hand thumb. It is easily learnt, and is specially adapted for Swiss and Tyrolean music. A short zither can be bought for about 10s. 6d., but the better instruments range in price from about 25s. to £5. The "Prim" is the ordinary form; the "Elegie" and "Concert" models are larger and dearer.

CONCERTED MUSIC.

The playing of good concerted music affords an intellectual enjoyment the intensity of which can hardly be understood, except by those who have engaged in it. The home which can produce from its own members an instrumental trio or quartet is indeed highly favoured, and the opportunity should never be neglected. The first concerted music in nearly every home will probably be vocal, and the number of duets, trios, glees, part songs, and anthems to select from is almost endless.

Playing duets (four hands) on the piano, is generally the form of concerted instrumental music first attempted, and it is very useful. The combination of the piano with another solo instrument, such as the violin, the violoncello, or one of the wind instruments opens up a most extensive literature. The sonatas for piano and violin by Bach, Haydn, Mozart, Beethoven, Schubert, Kuhlau, and Mendelssohn may be specially mentioned.

The combination of the piano with the violin and violoncello as a trio has been a favourite with all the great writers. Haydn has left

no fewer than thirty-one examples. Mozart, Beethoven, Schubert, Hummel, and Mendelssohn, to mention only a few, have all left trios of the greatest beauty. The piano may again be combined with one or with two violins, viola, and violoncello to form quartets and quintets.

But the form of chamber music which has been the special favourite of the great writers is that of the string quartet, for two violins, viola, and violoncello. Of this form there is an almost inexhaustible supply by all the chief composers.

A satisfactory performance is more difficult when there is no piano in the combination, because the keyed instrument is able to cover many imperfections in the others. But in the string quartet, if music of any difficulty be attempted, the four players need to be of nearly equal ability. The first violin naturally takes the lead, giving the character and time to the piece, but each player in turn will find himself taking the most prominent part, and any great difference in skill becomes noticeable. Each performer should know the whole score, and much combined practice is necessary.

Space will not allow any mention of the more unusual or of the larger combinations to be found in chamber music. All these works are published in cheap and excellent volumes by Peters. Breitkopf & Härtel, besides the volumes, publish them in single numbers. They may nearly all be purchased separately, for an average price of a few pence each, in the *Musical Pantheon* (Enoch & Sons).

MECHANICAL APPLIANCES.

Of late years there have been many inventions for the mechanical reproduction of music. Amongst the most popular of these are the phonograph and gramophone. There are many makers and many different styles of phonographs, but the principle is the same in all. The vibrations from the voice or instruments whose sound it is desired to reproduce are recorded on a specially prepared wax cylinder or flat disc. This is set in motion, usually by clockwork, and the point of the reproducer, resting on the record, follows all the winding impressions on the wax, thereby giving out vibrations which sound wonderfully like the original. Serviceable instruments may be bought from £2, 10s. up to £30. Records cost from 1s. up to as much as 20s. for a few of the rarer ones.

Fig. 620A shows the mechanism of a gramophone. The method of using it is as follows. Place the record on the turntable H, allowing the centre-pin of the latter to protrude through the hole in the centre of the record. Wind the motor by putting the handle through the escutcheon on the front of the cabinet and screwing it on the winding-shaft B. Wind the spring as far as possible. The motor should be wound after playing each record, unless the instrument has double or triple springs. The former

will play about three, and the latter about five 10-inch records. Put the needle in the sound-box J, first turning the sound-box over so as to rest on the taper tube I. Release the brake G, and allow the record to revolve three or four times before placing the needle on the first line (at left) of the record. Adapt the speed of the turntable to suit the record, by means of the speed regulator E. To increase the speed turn the screw to the left, and to lessen the speed turn the screw to the right. It is a general fault to play records too fast; seventy-two revolutions per minute will be found

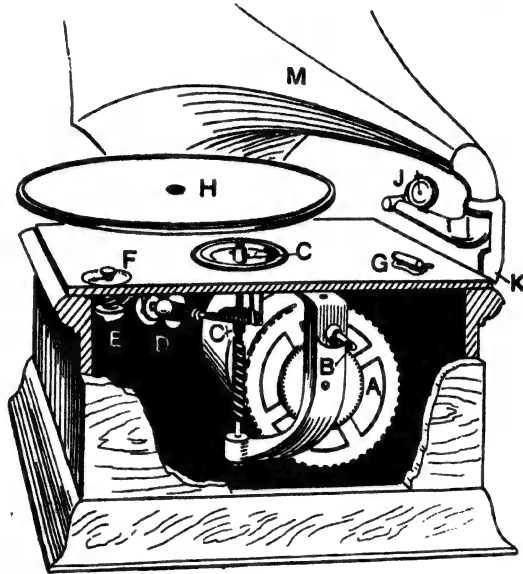


Fig. 620A.—Mechanism of the Gramophone

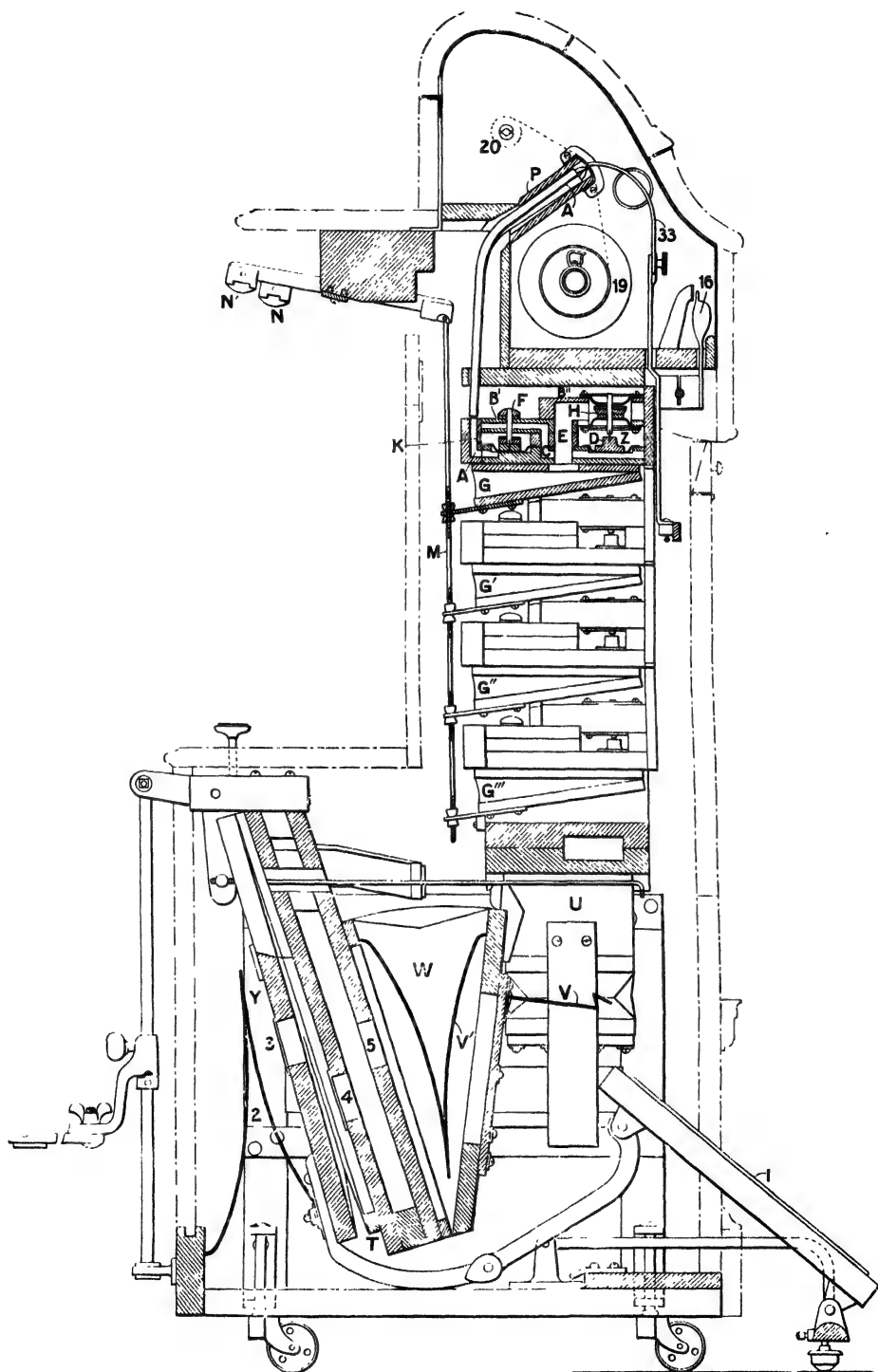
- A, Triple Spring and Cage. B, Winding-shaft on which Handle is Screwed. C, C, Turntable Spindle.
D, Governor. E, Speed Regulator. F, Speed Indicator. G, Bolt Brake. H, Turntable. I, Taper
Tube. J, Sound-box with Needle resting on Tube. K, Cast Arm. M, Trumpet.

to give most satisfactory results. "Talking" records should be played a little more slowly. When the record is finished, stop the turntable by means of the brake, and lift the sound-box off the record, taking great care that the needle does not drag across the face nor drop upon it. Take out the needle and throw it away. Never use a needle more than once.

The musical box, in which the sound is produced from a steel comb, by means of a revolving barrel in which pins are arranged at the required places, has long been familiar. The revolving barrel has also been used to play the organ, but recently much more satisfactory methods of playing keyed instruments have been invented. Perhaps the best-known of these is the Pianola (see the Plate). This consists of a piece of apparatus, in general shape not unlike a harmonium, containing a series of hammers so arranged as to lie exactly over the keys of an ordinary pianoforte. A perforated roll of paper, the perforations in which correspond to the notes of the piece of music to be played, is placed on

the instrument in view of the performer, who, by working two treadles, causes the paper to revolve over a series of air-holes. As the paper revolves, the air rushing through the holes causes the hammers to strike the keys of the pianoforte, and so nicely are the calculations made that the notes of the most intricate piece of music are played on the actual keyboard with the utmost clearness and precision. Besides the power of varying the pressure on the treadles, the performer has at his control, levers for regulating the volume of tone and the speed. The Metrostyle Pianola reproduces with great fidelity the expression desired by the composer. The net price is £54, 12s. There are now a great many makers of these appliances, and they differ in details as well as in price.

The following is a detailed description of the mechanism shown on the Plate. 20 represents the music roll, and 19 the take-up spool upon which it is wound after performing its duty. Whilst the paper (which passes over the tracker-bar P) is free of perforations the finger N remains in a normal position. As soon, however, as the perforation in the paper coincides with its corresponding hole in tracker-bar, the air at once enters the channel A, and is conveyed thereby to the primary pneumatic F. This consists of a circular disc of leather secured at its edges and placed over an opening almost equal in circumference to itself. Upon this disc (called a purse) rests a valve called a pallet, which in working serves the double purpose of excluding the air from its under side and admitting it on its upper side, and *vice versa*. When, therefore, the air above mentioned reaches the purse, it immediately inflates it, the upper side of this disc being contained in a chamber from which the air has been exhausted. The disc, being inflated, carries with it the pallet or valve immediately above it, and in so doing opens the upper valve to the free air, and closes the under one from the influence of the vacuum in which it is situated. The free air is thereby enabled to travel along the channel to the secondary purse and pallet D. This is lifted in identically the same way as the primary purse and valve just explained; but, this valve working internally, its effect is just opposite to that of the primary valve, in that, when lifted, the upper side H excludes the free air, and the under side is opened to the influence of the surrounding vacuum Z. This vacuum exhausts the bellows marked G, through the channel E, and this, in closing, depresses the finger N by means of the uplifting rod M, the finger working on a centre as shown. When, however, the paper closes the hole in the tracker-bar, indicating that the note is done with, it is of vital importance that the air remaining in the channels should be drawn away; otherwise the note would remain "speaking". To effect this, a small vent hole, shown at K (which is under the influence of a vacuum), is provided. The result is that, the air being drawn off, the primary pallet F falls. In so doing its under side is brought under the influence of the vacuum, and by the channel C the secondary purse is likewise exhausted, allowing the secondary pallet D to fall. The bellows G, being relieved of the vacuum, falls



MECHANISM OF THE PIANOIA

into its normal position again, being supplied with free air from the upper side of the secondary pallet H.

The various vacuum chambers are all exhausted by means of exhaust feeders and bellows, shown in the lower part of the drawing. Pedal 1 is pressed down and extends the feeder. This, in opening, exhausts the main bellows w, which is kept expanded in a normal position by the internal spring v. The effect of this spring v is to cause valve 4 to close when the feeder returns, thus preventing the inlet of free air at this point. In returning, the feeder pallet, or valve 3, opens outwardly, allowing for the escape of the air previously exhausted from the main bellows w. A spring, 2, is employed to return the feeder. Two governors, or control bellows, one of which is shown at U, are employed to regulate the amount of exhaust for expression and tempo, the expression varying at the performer's will by two levers not shown, and the tempo by the metrostyle pointer 16.

Many of the later inventions, such as the "Pianola Piano", have the automatic mechanism inside the case, so that the piano key-board is left free and may be played in the ordinary way. The "Pianola Piano" costs from about £80 to £200. The "Aeolian Orchestrelle" is practically the same mechanism applied to a reed instrument like the harmonium. The price is from about £150 to £600. The music rolls are naturally of different lengths and vary in price from 2s. 6d. to 8s. each, but they may be hired for a small sum. The annual subscription to a good circulating library of music rolls is £4, 4s.

BALL-ROOM DANCING.

INTRODUCTION

How to Learn.—Although ball-room dancing differs greatly from stage, fancy, and character dancing, certain steps and principles are common to all styles, wherefore the learner of any age would save time by beginning with a few simple exercises and easy steps before starting upon the Waltz. The art of waltzing is a thing by itself, and demands considerable skill if it is to be thoroughly mastered in all its fascinating variations, some of which are absolutely necessary to the dancer who desires not only to avoid the tiresome monotony of perpetually waltzing on the same turn and in the same direction, but also wishes to steer clear of the numerous couples who get into the way of, and even violently collide with, those who dance with greater ease and judgment than themselves.

The pupil, young or old, who has never learnt any dancing at all, should devote the first few lessons to such light exercises as would enable him to stand and bend in the five positions—raise either leg smartly, separate and bring his two feet together firmly and neatly, rise and sink from the instep, &c. After such exercises (well known to teachers of dancing) a few of the easier steps, upon which general dancing is constructed, should be tried, such as *glissades*, *jettés*, *chassés*, *pas marchés*, and plain *pirouettes* upon the two feet. These steps are quite easy to learn, and the pupil who has been wise enough to devote a little time to their practice will assuredly find his work simplified when he attacks the Waltz and other round dances. Grown-up pupils are usually quite unwilling to learn anything but the actual ball-room dance they require, and the mere mention of an exercise or step which would lead up, say, to the Waltz or the Two-step is treated with scorn and met with a decided refusal to be troubled with any steps save those contained in the dance demanded. Well, professors teach to live; so the pupil is given in to, much to his own disadvantage. Unlike stage dancing, which should be begun at the age of from eight to ten, ball-room dancing may be started at from seventeen to twenty, and even later; but of course, like all arts which depend upon physical or muscular skill for their successful practice, the earlier in life the pupil makes a start, the better his chance of becoming an expert dancer.

Many parents like to have their children taught at four or five years of age, and before they have sufficient muscular strength or sense of balance to do any practical good work. This, in my opinion, is so much waste of time and energy; but as it flatters the said parents' vanity, and,

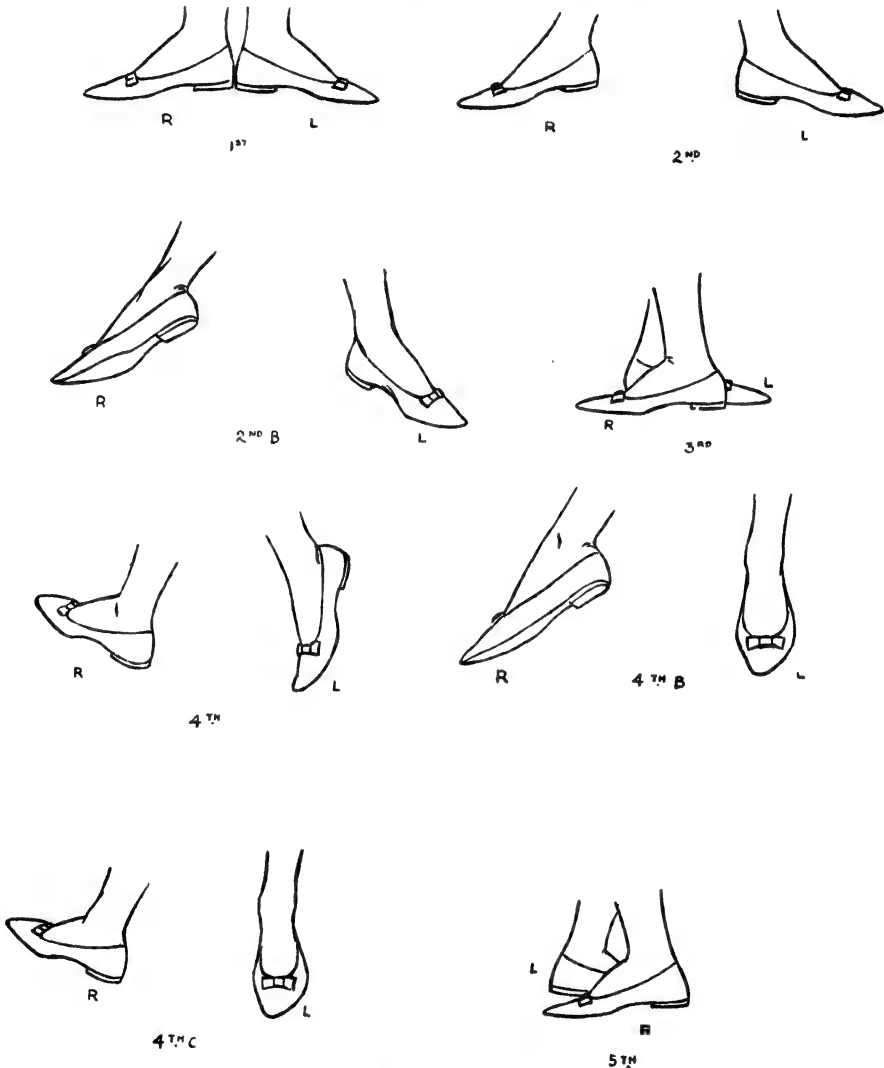


Fig. 621.—The Five Positions

moreover, brings pecuniary profit to those numerous ladies who are considered specially clever at "training young children", it has its *raison d'être*, and probably does as little harm as good.

Pupils possessed of but little natural aptitude must never expect to become very brilliant performers, and all who aspire to attain to even

only fair proficiency should have, at least, the gift of what the French call *le sens musical*, without which the most agile and active of dancers will experience continual trouble and discomfort. The really successful performer will possess also a keen sense of balance, and thus equipped may, under the careful guidance of a clever teacher (who should also have musical feeling), reasonably hope to master thoroughly all the ball-room dances which are in vogue both in Britain and on the Continent. The

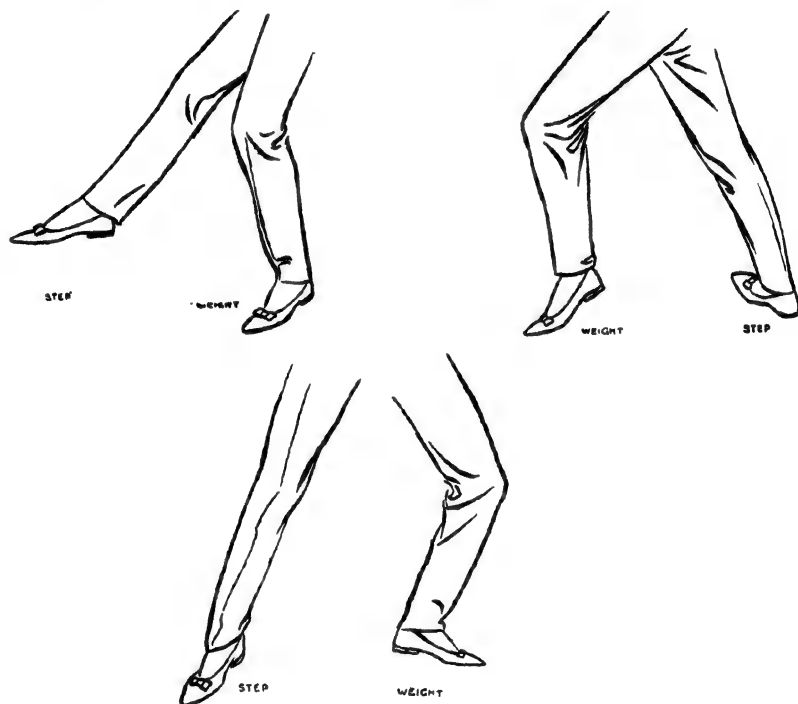


Fig. 622 — Proper Support of the Body

number of lessons necessary will naturally depend upon the memory, activity, and musical feeling of the pupil, who should in all cases begin by taking a few private lessons, in which he can easily and thoroughly learn the outlines of steps and dances before joining a class. Finally, the pupil is recommended to join a class of fair size only (sixteen to twenty-five pupils), and, moreover, one in which only dancing, pure and simple, is taught. Ball exercises, games, and skipping-rope exercises are certainly popular, and in their way possibly useful and even hygienic; so indeed are swimming, boxing, riding, and golf; but the best dancers known to the writer, both on the stage and in the ball-room, did not introduce any of these agreeable pastimes into their dancing studies.

The Five Positions.—The five positions (fig. 621) should be learnt before attempting any steps, and the pupils should accustom themselves

to bend and rise freely in all five. The all-important principle of keeping the weight of the body off the leg which forms a step, while getting elasticity or spring from the knee of the leg which supports the body, should be most carefully thought out and acted upon (see fig. 622).

THE WALTZ.

The waltz movement must be one of the oldest used in the art of dancing. Swinging or swaying from one foot to the other, while moving forwards, backwards, and round, constitutes its basis. If this be done regularly or rhythmically, we get a very rough outline of the modern waltz movement. If we now divide each rhythmical and swinging movement into three steps, and perform these three steps to one bar of waltz music, we have a fair outline of the "*Valse à trois temps*", which is, at the present day, the most popular dance of the ball-room all the world over.

There are various methods of teaching the step, and so different do these methods appear to the novice, that he may well marvel how two good dancers, who have each been taught upon a different method, yet manage to dance together with ease and in perfect agreement. Observation and experience will, however, soon prove to the novice that almost *any* method which compels the dancers to execute three distinct sliding steps, bringing the two feet close together on the third step, will, if performed in strict time to a bar of waltz music, enable two waltzers to dance and turn with each other. Space will hardly permit of a detailed description of various methods in the present article, but an endeavour will be made to explain clearly the one believed to be the most practical and the most elegant. A bar of waltz music contains three beats. To each of these beats a step must be taken, the feet coming together on the third and last beat of the bar.

Practically, the dancers complete one entire circle for every two bars, or perhaps a half circle for every bar. Therefore the dancers must take six steps for this circle, which occupies two bars. The outline, on the right turn, is as follows (fig. 623):—

1. Slide right foot forward and under your partner.
2. Slide left foot forward and somewhat round partner.
3. Bring right foot in front of and close to left foot (at the third position), turning half round.
4. Slide left foot backwards.
5. Slide right foot behind and close to left foot (at the fifth position).
6. Holding the feet close together, rise just sufficiently upon the balls of both feet to allow the heels to slide easily and pivot half round, allowing right foot to come naturally in front of and still close to left foot (at the third position or nearly so), heels down.

Beginners often create a lot of imaginary trouble when learning this

extremely simple sixth step, by shifting the balls of the feet during the turn, and so causing the feet to separate unduly. When two dancers waltz

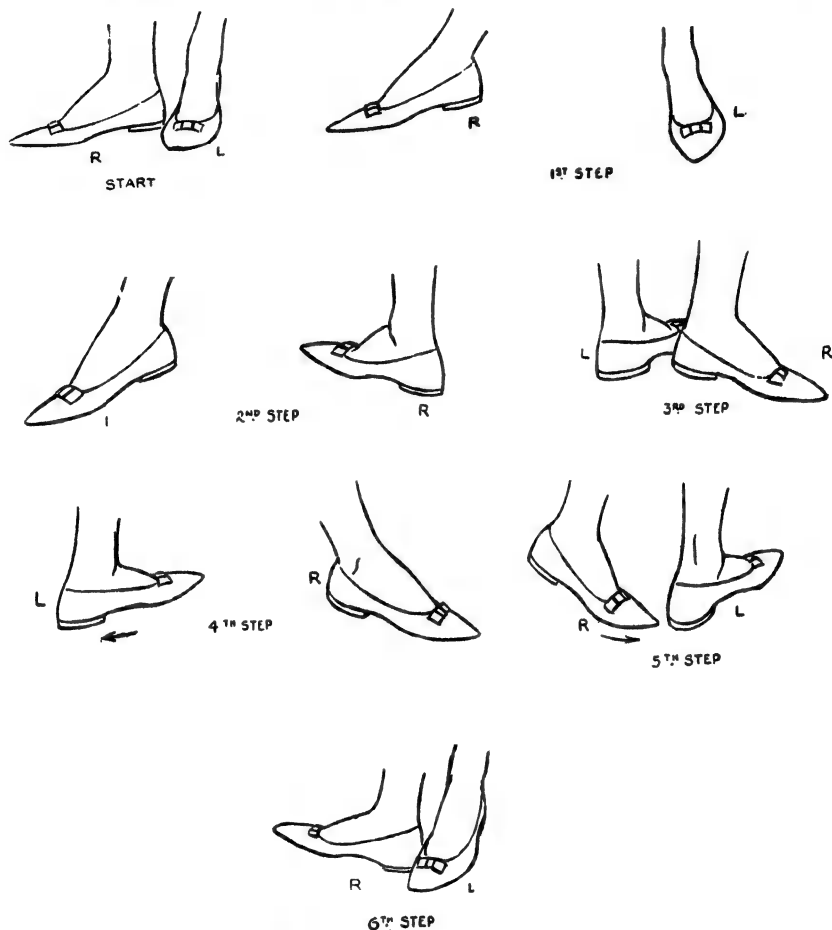


Fig. 623.—The Six Steps in the Waltz Circle

together they must face each other, and the gentleman commences with the fourth step backwards on the left foot. The movements of the two partners are related as follows:—

LADY (start from third position).

1. Slide right foot forwards.
2. Slide left foot forwards.
3. Slide right foot close in front of left foot, half turning.
4. Slide left foot backwards.
5. Slide right foot behind and close to left foot.
6. Half turn, pivoting with feet together.

GENTLEMAN (start from third position).

4. Slide left foot backwards.
5. Slide right foot behind and close to left foot.
6. Half turn, pivoting with feet together.
1. Slide right foot forwards.
2. Slide left foot forwards.
3. Slide right foot close in front of left foot, half turning.

BALL-ROOM DANCING.

Turn gradually, so that the circle may be completed in the six steps. On the third and sixth steps the waltzers both bring their feet together (at the third position).

Reverse Turn, or Waltzing to the Left.—

LADY (start from third position).

1. Slide left foot forwards.
2. Slide right foot forwards.
3. Slide left foot close in front of right foot, half turning.
4. Slide right foot backwards.
5. Slide left foot close behind right foot.
6. Half turn, pivoting with feet together.

GENTLEMAN (start from third position).

4. Slide right foot backwards.
5. Slide left foot close behind right foot.
6. Half turn, pivoting with feet together.
1. Slide left foot forwards.
2. Slide right foot forwards.
3. Slide left foot close in front of right foot, half turning.

Waltzing Straight Ahead without Turning

(fig. 624). Start from third position.

1. Slide right foot forwards and under partner.
2. Slide left foot forwards and under partner.
3. Slide right foot up to and *behind* left foot in closed (third) position.

Repeat, beginning with left foot, and so on.

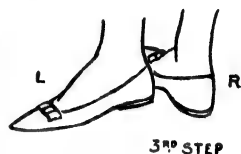


Fig. 624.—Waltzing Straight Ahead: 3rd Step. Start and first two steps as in fig. 623.

Waltzing Straight Backwards without Turning (fig. 625). Start from third position.

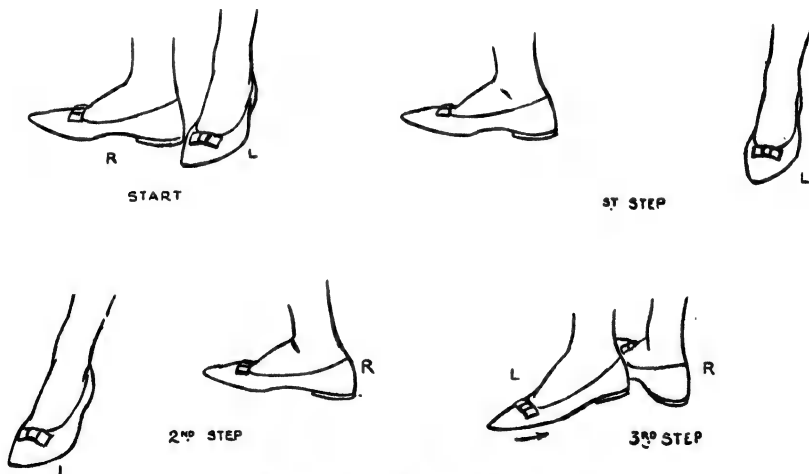


Fig. 625.—Waltzing Straight Backwards

1. Slide left foot backwards.
2. Slide right foot backwards.
3. Slide left foot up to and *in front* of right foot in closed (third) position.

Repeat, beginning with right foot, and so on.

Great care must be taken when waltzing forwards or backwards, without turning, to use the feet alternately, *i.e.* never to commence two

consecutive bars with the same foot. It is needless to say that in straight waltzing one dancer goes backwards while the other moves forwards.

The above are the four principal ways of waltzing. We will now describe two other important variations.

Turning to the Left while Travelling to the Right.—Standing with his back to the wall and facing the centre of the room, the direction in which the dancer should waltz is to the right, this being the natural way for the right turn.

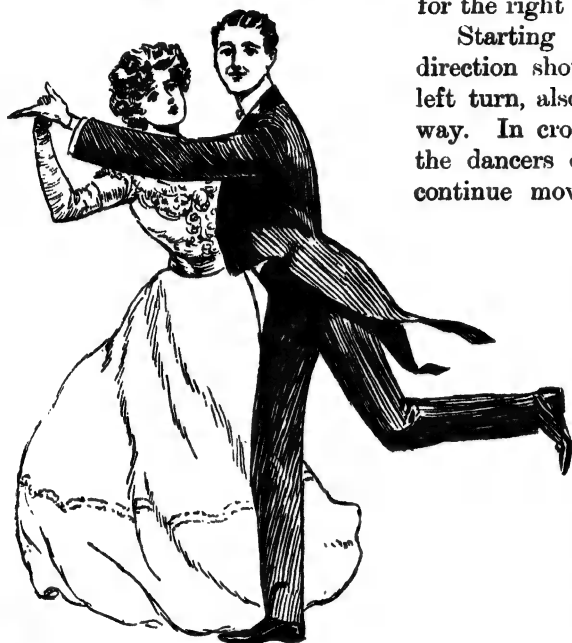


Fig. 626. —Bad Style

Starting from the same point, the direction should be to the left for the left turn, also because it is the natural way. In crowded ball-rooms, however, the dancers often find it necessary to continue moving to the right way of

the room, while reversing (turning to the left), so as to avoid the difficulty of dodging the couples moving in an opposite direction. When thus waltzing in a difficult and unnatural direction, the turn itself must be greatly increased, and this can only be effected by much crossing of the feet and pivoting or swinging on the ball of each foot, during which

the unskilled waltzer will easily get out of step. Similar difficulty will be encountered when turning to the right while travelling to the left.

Changing from Right to Left Turn.—We will now suppose that the pupil has acquired a clear and rhythmical outline in his waltz step, and that he can both reverse and dance straight forwards and backwards. He should now learn to go from one way of waltzing to another without stopping or in any way breaking the continuity of his movement, and these changes of turn and direction generally give considerable trouble both to the pupil and to his teacher.

The change of turn is arrived at by waltzing one bar straight forwards or backwards and then *immediately* commencing to reverse the turn in the next bar, the amount of altered turn in this bar depending upon the direction the dancer intends to take. The *modus operandi* is both simple and exact, yet some pupils experience considerable difficulty in acquiring this all-important change. Many learners when executing the change alter the *tempo* of the Waltz, and thus instantaneously find their steps at

variance with those of their partners. Then again, others persist in using the same foot twice in succession, or attempt to turn before having completed their intermediate or change step, while not a few lose patience and complain about being taught what to them appear to be unnecessary intricacies which are never observed in actual full-time waltzing! They forget that the Waltz slowly and painfully walked *must* look and feel very different from the Waltz quickly and easily run. Such pupils derive but little consolation from the undoubted fact that exceptional people waltz quite agreeably without having learnt. The art of the teacher consists in finding out clearly what is actually done by a good waltzer, and in showing the average pupil how to do it in the best manner.

Spring or Elasticity of Movement.

—The Waltz, like nearly all other dances, whether of the stage or ball-room, requires a perpetual use of the knees for the purpose of imparting that spring-like elasticity without which all dancing is lifeless and heavy. A perfect waltzer bends the knee of the leg which receives the weight of the body on the *first* beat of the bar, and both knees slightly on the third beat when the feet come together. After each bend the knee or knees recover some of their straightness. This means that a slight springy movement is kept up *all the time*, and greatly adds to the ease and elegance of the movement. Straighten the leg as it forms a step and keep the weight of the body away from it.



Fig. 627.—Good Style

Heavy Partners.—It is humiliating to a woman to be heavy in dancing. Actual weight in the scales has rarely anything to do with this uncomfortable defect, for the writer has known people who scaled 16 stone to prove themselves agreeable partners. Slow action, want of spring, and inability to pivot or swing round sufficiently, are among the chief causes of heaviness. The experienced teacher will find out which.

Tempo.—Formerly the Waltz, in Britain, was danced perhaps too slowly, nowadays it is impossibly fast. Conditions seem to be governed by the silly caprice of young would-be smart “sports”, who love to stamp and caper round the room all out of time, while inanely waving the left hand, bunched up with their partner’s right hand, to “keep time”. The reasonable *tempo* to which dancers can really move in comfort has long since been settled by such first-rate authorities as Johann Strauss, Josef Gungl, and

Emile Waldteufel, whose original and delightful music has been danced to in all countries where waltzing is regarded as an art. After observing the sensible and truly enjoyable *tempi* followed in Vienna, Moscow, or Boston, it is irritating to stand by and see the wretched effects in a British ball-room of the rule and influence of "the rowdy dowdy boys".

THE TWO-STEP.

Like the Waltz, the "Two-step" is quite an ancient movement. The "Galop", "Valse à deux temps", and "Two-step" have the same outline, and differ only in accent and manner. The "Two-step" consists of a fairly long slide sideways, followed by a push or *chassé*, which causes the slide to be repeated, thus making two distinct movements. If we slide the right foot at one, we push it farther with the left foot at two and then use the left foot, which in its turn is pushed farther along by the right foot.

The step may be danced forwards or backwards without turning, or on the right turn or on the left. When changing, make the step once straight backwards or forwards, then turn more or less in the next bar. The "Two-step" occupies one bar of $\frac{3}{4}$ or $\frac{3}{8}$ march or rag-time. Care should be taken to give the push so smartly that the second movement is divided as little as possible; otherwise the dance is made to look like a lame "Polka". Pivoting and pointing the foot in the direction one intends to go afford the means of turning. The knee of the leg that *follows* should bend and straighten twice in each bar. The leg which is pushed should be straight.

THE BOSTON.

This is a long, drawn-out, slow Waltz, in which the sliding of the feet and bending of the knees must be even more marked than in the ordinary Waltz. As the *tempo* of the Waltz in Britain is much too fast for this measure, many dancers spread the step over two bars, thus turning it into half time. Dancers whose sense of rhythm is defective are often amusing to watch when they essay this effect. Turn less than in the ordinary Waltz, making the first step, forwards or backwards, very long and smooth, the second and third steps small and quick.

THE POLKA.

The "Polka" is quite an agreeable rhythm, and so much very charming music has been written for it, that for this reason alone it ought never to be allowed to go out of fashion. The measure is $\frac{2}{4}$, and to the

four beats (quavers) in each bar three steps, followed by a rest, are made as follows:—

1. Slide right foot sideways.
2. Push it farther with left foot.
3. Hop, or rather fall, gently on to right foot, and immediately raise left foot on point behind.
4. Pause or rest. Repeat in the same manner with the other foot. Turn, as in the "Two-step", by directing the step forwards or backwards, and also pivoting more or less on the hop.

Most teachers recommend the lifting of the foot on the second beat, and technically they are doubtless correct; but the writer has found that unless this is done very slightly, the movement is apt to become rough and ungainly. Like many other round dances, the "Polka" may also be danced straight up or down without turning. Make use of the knees gently.

SQUARE DANCES.

The Quadrille.—In the early days of this square dance various steps such as *chassés*, *assemblés*, and *glissades* were introduced, and gentlemen were given a brief opportunity of displaying their activity as solo performers. Nowadays the five figures are just walked through, care being taken to slide and not lift the feet.

Four or eight steps should be taken (neither more nor less) as required. The five figures are made up from the following movements, which also take place in other square dances.

Forward and Back.—Walk forward four steps and back four steps, bringing feet together on the fourth step.

Cross Over.—Walk eight steps, changing places with opposite dancer.

Balancé.—Walk forward and back (four steps each way) with partner, then give both hands and turn in eight steps.

Ladies' Chain.—Ladies cross over, changing places, and giving their right hands as they pass each other, then give their left hands to the opposite gentlemen, who turn them round with their own left hands.

Promenade.—Holding the lady's left hand in his left hand, the gentleman leads his lady to opposite place.

Right and Left.—Two couples change places with each other in eight steps. The ladies pass inside (between) and the gentlemen outside, then the ladies pass before them into places. Repeat to get back home.

Half Balancé.—Take partner's hand and slide towards and away from each other, bringing feet together on the second step.

Grand Round.—All dancers in the square join hands and walk forwards and backwards twice.

THE COURT QUADRILLE.

FIRST FIGURE.

Right and left.
Balance with partner.
Ladies' chain.
Promenade.
Half right and left.

SECOND FIGURE.

Top lady and opposite gentleman. Forward and back twice.
Cross over.
Forward and back once.
Cross over to place while partners balanced.

THIRD FIGURE.

Top lady and opposite gentleman. Cross over.
Return halfway, giving left hand (and right hand) to partners.
Chain half balanced.
Divide and go to opposite places.
Forward and back those who began (twice).

Forward and back with partner (once).
Half right and left.

FOURTH FIGURE.

Top lady and partner. Forward and back once.
Forward again, lady going to opposite gentleman, while her partner retires to his place.
Forward and back, opposite gentleman with the two ladies (threes).
All forward, join hands in circle, go to the left, divide, and finish in opposite place.
Forward and back with partner (once), then half right and left to places.

FIFTH AND LAST FIGURE.

Grand round, joining hands, forward and back twice.
Repeat second figure.

The Lancers.—" *Le Quadrille des Lanciers*", as it was formerly called, was a kind of military square dance in which a certain precision and drill were maintained throughout its five figures. In Britain it has long since degenerated into an inane and childish romp, which varies in its eccentricities according to the locality and the set of people who dance in it. It is best learnt by following and imitating the other dancers. A fortnight's strict diet and a course of jiu-jitsu or other extremely athletic exercise should be taken before venturing upon this trying and somewhat dangerous pastime, which at all times requires pluck and determination for its successful performance. The expert dancer of "Kitchen Lancers" must be "made in England", and, for the honour of his country, should never be seen (dancing) out of it. The genuine old "Lancers" was effectively danced in 1906 in Mr. Tree's production of "Colonel Newcome" at His Majesty's Theatre.

The Caledonians.—This square dance contains the chief characteristics of both the "Quadrille" and "Lancers".

The Quadrille Croise.—A most ingenious yet simple arrangement of the ordinary Quadrille, which permits both top and side couples to execute each figure at the same time, and so avoid any tedious waiting while other couples dance. It is sometimes danced in France, and is occasionally seen in Britain. There is, of necessity, a brightness and interest in this square dance not to be found in any of the others. It ought most certainly to find favour in our British ball-rooms.

THE COTILLION

The Cotillion is a dance which comes into and goes out of fashion, but will never wholly disappear. The various figures are interspersed with the waltz. Presents are given to the most successful dancers. The Cotillion needs a leader, who introduces the various figures. A list of these would be of little service, as they vary from season to season.

GOOD VERSUS BAD DANCE MUSIC.

Probably the best dance music comes from Austria, Hungary, and Germany. Roumania and Russia also give many original and expressive dance measures. The orchestras made famous by Lanner, Labitzky, Gung'l, Lumbye, Ziehrer, the Strauss brothers, Waldteufel, and the real Hungarian Tzigane bands have for many years shown us how the best dance music should be performed. Beautifully composed, effectively scored, and played with telling accent and expression, these fascinating dances convey a sense of vitality and poetry which are entirely absent in most of the maudlin or commonplace compositions which become the rage in the British Isles. Listen to Johann Strauss's "Kaiser Walzer", Waldteufel's "Es muss schon Fröhling werden", Tschaikowsky's "Eugen Onegin" or "Casse Noisette", Gung'l's "Zephyr Lüfte", Eduard Strauss's "Doctrinen", and many of his brother Josef's entirely neglected or forgotten creations, and after hearing these try "See-saw" and the "Choristers", two of our biggest "successes". Comment is needless. The races or nations which produce good musicians also shine in the fine art of dancing. Taglioni, Cerito, and Carlotta Grisi came from Italy. So also did Paganini, Corelli, and Verdi. Similar examples may be quoted from Poland, Russia, Hungary, or Germany. Let it, however, be freely admitted that Britain holds her own in step dancing and burlesque movements, to which much pleasing and telling music is written by British musicians.

ANTICS OF THE BALL-ROOM.

More aimless and childish antics are practised and tolerated in the British ball-room than may be seen in that of any other country. Shaking up a bunched hand incessantly, stamping, stopping the turn, suddenly, to adopt the walk of the musical comedy swell, these are only a few of the unintelligent mannerisms which detract from the real smartness of the Waltz. Have not stamping and vulgar hopping made the once pleasant "Polka" impossible? Are not our numerous British versions of the "Lancers" an insult to manliness and good taste? Do we not vulgarize and

ultimately banish any new suitable dance which, once in a way, gets a chance in society? Did we not utterly ruin the "Pas de Quatre" and the "Washington Post" by introducing mock grace and weak theatricalism into the former and imbecile horse-play into the latter? Have we ever seriously taken up any of the graceful variations in round dances which find favour in America? We do not allude to our very old friend the "Galop", which has certainly been accepted as a "new" dance called the "Two-step"; we refer rather to such pretty measures as the "Rockaway", "Jersey", and so-called "Five-step", &c.

Since we also taboo the old "Polka Mazurka", we have nothing to vary the monotony of everlasting waltzing except "Kitchen Lancers", which owe their continued popularity to the opportunity they afford to people who rather enjoy making fools of themselves in public. Among habits to be strictly avoided we would mention dancing with either straight or bent stiff knees, holding the lady too loosely or too tightly, placing the right hand in the middle of her back, leaning against her shoulder, placing the hand upon the hip or shaking it inanely while dancing. Dance smoothly, quietly, and rhythmically; look like a man and a gentleman, not like a monkey up a stick. Ladies should remember the influence they very properly possess, and not allow any man to make them appear awkward and foolish by reason of his aimless antics.

RECREATIONS.

INDOOR GAMES.

GAMES REQUIRING MOVEMENT.

Badminton.—Badminton is an excellent game somewhat similar to lawn tennis, but played with shuttlecocks in place of balls. The court marked out on the ground measures 44 feet by 20 feet. A net about 18 inches deep is stretched across the middle of the court, so that its top is 5 feet from the ground, and a service line is drawn on the ground on each side of the net at a distance from it of $6\frac{1}{2}$ feet. The space between each service line and the end line on the same side of the net is bisected by a longitudinal line, so that on each side of the net there are two courts (right and left) behind the service line. The bat is like a tennis racket, and should not weigh more than 5 ounces; and the shuttlecocks, of cork with feathers attached, measure 3 to 5 inches in length and weigh about a quarter of an ounce.

Badminton may be played with one, two, three, or four players on a side, and the court should be a covered one, to prevent disturbance of the shuttlecocks by wind. In still weather the game can be played with advantage out-of-doors, like lawn tennis. Choice of courts is decided by tossing, the side that loses the toss taking the serve. The player in the right-hand court of the serving side serves by striking the shuttlecock over the net and the opposite service line, so that it shall fall within the diagonally opposite court, and only the player within this court can take the service. After the service both sides may go as near the net as they like in the course of play, and may strike the shuttlecock to anywhere within the opposite courts, so long as it goes over the net. If the shuttlecock is served by a player under, into, or through the net, or outside the court, it scores against him; if his side is in, the hand goes out; if the other side is in, it scores an ace. Only the side in can score. If the shuttlecock touches the ground within the opposite courts, or touches the dress or person of a player in the opposite courts, the striker scores an ace if his side is in; if the other side is in, its hand goes out. When an ace is scored the server and his partner change courts. The game is usually 15 for singles or doubles, 21 for three-a-side, 28 for four-a-side. In games of 15 points the sides cross over when the score stands at 8. When the

score stands at 13 all (in a 15 game), the sides set 5, that is, play for 5 more; when at 14 all, they set 3; and there are similar arrangements for the other scores given.

Badminton is a favourite game in India among Anglo-Indians, but it has not attained to very great popularity in Britain, lawn tennis having proved much more suitable to the conditions prevailing in Britain. Under suitable conditions, however, it can provide plenty of exercise and interest.

Bagatelle.—Bagatelle is played on a table or board by any number of players, their object being to hole a number of balls in the nine cups let in at one end of the board. A typical bagatelle table showing the cups, balls, scoring holes at the sides, &c., is illustrated in fig. 628. The cups, it will be noticed, are numbered from 1 to 9, that bearing the number 9 being in the centre, surrounded by the others. The more highly numbered cups are those most difficult to place the ball in.

Tables vary in price according to size and quality, from £10 to £15, inclusive of two cues, a mace, a bridge, and nine balls, and are generally from 8 to 10 feet in length, and from 2½ to 3½ feet in width. Folding boards with fittings cost, according to size, from three to eight guineas, and vary from 6 feet by 1½ foot to 9 feet by 2 feet, or even larger. The cue is used more frequently than the mace, and rests on the left hand (which is posed in the form of a bridge), between the the first finger and thumb. The "bridge" is made as in the game of billiards; the method of making it being shown in fig. 629.

For the lead each player in turn strikes a ball up the board towards the cups, and endeavours to hole it. The player whose ball rests in the highest-numbered cup wins the lead. The black ball is then placed on the white spot at the top of the board, and the other balls are struck by the player in succession from the white

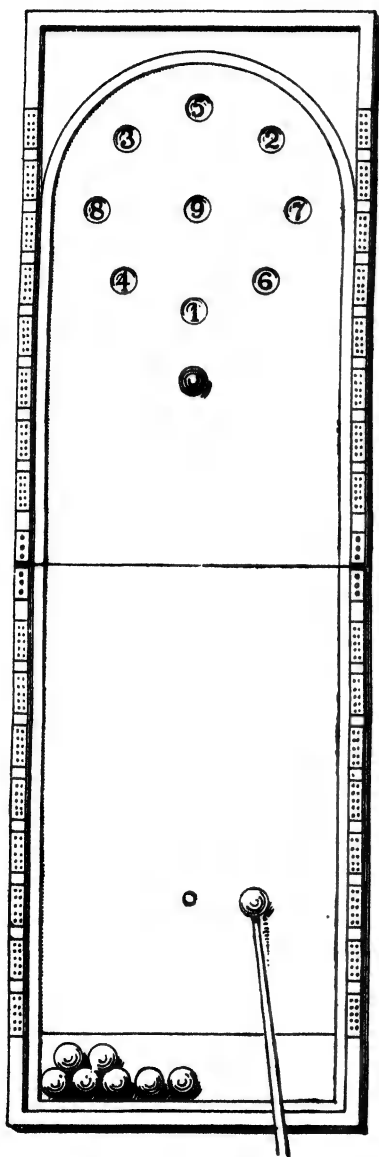


Fig. 628.—Bagatelle Table

spot at the lower end of the board. The player must first aim at the black ball. Until he strikes it he cannot score, and his balls, whether holed or not, are removed from the board, and cannot be used by him again during that round. Once having hit the black ball, the player may hole the balls either off the cushions on either side, off another ball, or directly into the cup. All balls failing to cross the centre line (formed by the folding of the board), or running back across it, or struck off the table, are dead balls. When the player has finished his round, he adds together the numbers of the holes into which his balls have fallen, and indicates his score with a peg in the marker on one side or other of the board. Holing the black ball counts double. It must always, if it has been moved from the spot, be replaced after the round.

For the *Cannon* game only three balls are required, coloured respectively white, red, and black. At the beginning of the game the black ball is placed on the white spot in front of hole 1, and the opponent's ball midway between holes 5 and 9. The player must always stand at the end of the board, and not on either side of it. He may place his ball anywhere within baulk, *i.e.* the portion of the board inside a line drawn through the white spot on which the striker's ball is placed. To make a cannon, the player must first hit the black ball and then his opponent's. After each cannon, for which he scores two points, the player replaces his ball in baulk in whatever position he likes. The score may be increased by holing the balls in addition to making a cannon. The black ball counts double, and the highest score possible at one stroke is 35. The cannon game is frequently played on a table 12 feet in length, without holes.

Sans égal is a game for two persons, one player taking the four red balls, the other the four white. The black ball is placed on the white spot at the top of the board. The player who leads strikes one ball up the board to hit the black ball and hole one ball, or both if possible. His opponent plays next with similar intent, and so on alternately, each scoring the points made by his own ball, and the black ball counting double to the player who holes it. If a player holes an adversary's ball, the points made are added to his opponent's score. The player who makes the greatest number of points in each round takes the lead in the next.

Mississippi is played with the bridge sold with every bagatelle board, which is placed close up to the half-circle at the end. Each player attempts to strike the nine balls successively against the cushion on one side or the other, and thence through the bridge into the holes, and if he fails to do so, the stroke is scored to his adversary. The game is sometimes varied by placing the black ball on the white spot, in which case it must be hit by the player before he can score.

In a simplified form of mississippi called *trou-madame* the balls need not first strike the cushion, but may be played straight through the bridge into the holes.

Billiards.—The game of billiards has been played in England since the 16th century, and was imported from France or Italy. It is played on a

table usually 12 feet by 6 feet 2 inches, the lowest price of which averages £50 inclusive of balls, cues, half-butt, rests, and marking-board. Smaller and what are called "miniature" tables, varying in length from 5 feet to 10 feet, are obtainable at cheaper rates—from £4, 10s. to £37. When it is not possible to set apart a room entirely for the game, the combined automatic dining and billiard table is an excellent institution, costing from £23 to £31, and measuring 6 feet by 3 feet or 8 feet by 4 feet.

The balls, three in number, are $2\frac{1}{8}$ inches in diameter, and coloured respectively red, white ("plain ball"), and white with a spot ("spot ball"). Cues vary in length from 4 feet 6 inches to 5 feet. On a full-sized table it is sometimes necessary to place the cue on a rest ("jigger"), which should be within 10 or 12 inches of the striker's ball, and both cue and rest should be held as nearly horizontal with the top of the table as possible. A very long cue (the "half-butt") is also provided, and a butt rest, which may be placed nearer to the ball than the ordinary rest.

At the beginning of the game the red ball is placed on the "spot", which is about $12\frac{1}{4}$ inches from the top cushion, and the striker's ball in the semicircle ("the D") at the lower end of the table, within the "baulk line". There are also the right- and left-hand spots in baulk at either end of the "D", the centre spot between the two middle pockets, and the pyramid spot midway between the centre spot and the top cushion. To leave one's own and the red ball in baulk when one's opponent's ball is in hand is to make a "double baulk", and oblige him either to play his next stroke up the table or to give a "miss".

At the commencement of play both white balls are off the table ("in hand") and the players "string for the lead", that is they place their balls on the left- and right-hand spots in baulk respectively, and play so as to

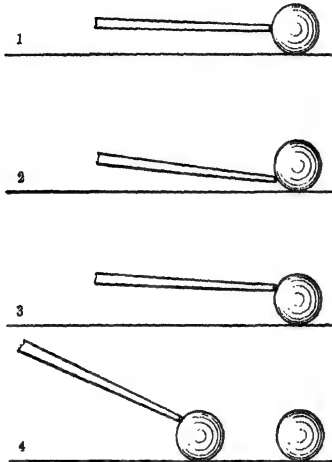


Fig. 629.—Billiards—"The Bridge".

hit the top cushion and rebound into baulk; whichever gets his ball nearest to the bottom cushion wins the lead and chooses his ball. He then "breaks the balls", *i.e.* places his own and the red ball on their respective spots, and plays to hit the red ball, or if he prefer not to hit it, "gives a miss", or requests his adversary to begin the game.

In playing, "strike fairly from the shoulder, and not merely from the elbow", with the arm close to the body. The cue should be almost horizon-

tal with the table, and should be supported on the "bridge" formed by resting the upper portion of the wrist and the finger tips on the table, drawing up the knuckles to form a hollow under the palm, and raising high the



[From Bohn's *Handbook of Games*.

Fig. 630.

1. The Central Stroke. 2. Cue for the Twist or Pull Back. 3. Cue for Following Ball. 4. A Twist or Pull Back when one ball is near another.

thumb, between which and the adjoining knuckle the cue rests (see fig. 629). The distance between the bridge and the ball should be about 6 inches.

After deciding at what point the striker's ball should be hit, the eye should rest on the object ball. If the striker's ball is hit full in the centre, this is called the "full centre stroke" or "straight hazard"; if above the centre, a "high"; and if below, a "low stroke". A "side stroke" is made by striking the ball on that side of the centre (and horizontally with it) on which the player intends it to proceed after contact with another ball. When the ball is struck high, with a pushing motion, it follows after the ball ("object ball") upon which it impinges; this is called a "run through" or "following stroke". The higher a

ball is struck the more swiftly it travels. A "pull back" is accomplished by striking the ball low and giving a sudden backward jerk. This causes the player's ball to rebound from the other instead of running after it. If the player's ball stops dead on the spot previously occupied by the object ball, this is termed a "stab shot".

If at impact half of the object ball, as viewed from the striker's position, is covered by the striker's ball, the two balls will move at about the same rate of speed, but at different angles. This is shown in the accompanying diagram, as also the angles followed by the "three-quarter" the "quarter", and the "fine ball".

Particular attention should also be paid to the different angles of the table, *i.e.* the change in the course of a ball after striking a top or side cushion. It is a well-known axiom in billiards that "the angle of incidence is equal to the angle of reflection"; for instance, if a ball is struck from the right-hand spot in baulk to the centre point of the top cushion, it will rebound over the left-hand spot in baulk. The angles, however, will not be equal if the ball is hit at any other point than its exact centre, and also if much or little force is used in the stroke. If the ball is struck very softly the angle of reflection will be more, and if hard, less than that of incidence. It is advisable for a beginner to make a chalk mark on the top or side cushion, and practise striking his balls at it, first from one side and then from the other side of the angle. This he may follow up by introducing the red and white balls in the line of the angles, and striking first one and

then the other (a "cannon") off the cushion. He should next turn his attention to "winning hazards" (when the striker with his own ball pockets another ball) by practising with the two balls in a line near to each other and in the direction of a pocket, and then gradually placed farther apart. Lastly, the "losing hazards" (when the striker pockets his own ball after having with it struck another ball) should be practised.

In a "cramp game" one player gives his opponent some advantage, such as five pockets to one. The handicapped player has the choice of the

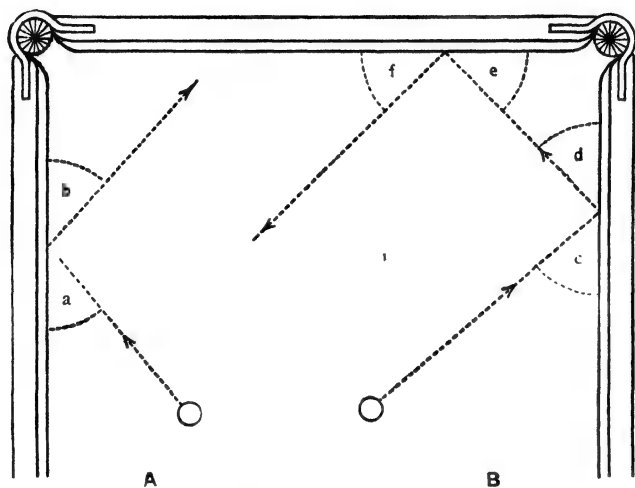


Fig. 631.—Angles of Incidence and Reflection.

pocket, and usually takes one of the top corner ones. Should he play into any other pocket the score counts to his opponent. If the latter plays into his adversary's pocket, the score in the same way counts against him.

The customary score is 50 points—in a cramp game it is only 21—made by the following strokes or combinations of them:—For a cannon, 2; for a white winning hazard (when the striker plays at the white ball and pockets it), 2; for a white losing hazard (when the striker pockets his own ball after having first hit the white ball), 2; for a red winning hazard, 3; for a red losing hazard, 3. If the striker's ball is pocketed after touching both balls it is reckoned as pocketed off the ball first struck. The adversary scores 1 point for a miss when the player fails to strike any ball, or when the player's ball is forced off the table without first striking another ball. When a player "runs a coup" (pockets his own ball without first striking another ball), or, in the act of drawing back his cue after a stroke, knocks a ball into a pocket, his adversary scores 3 points.

If a player when in hand moves his ball with insufficient strength to take it out of baulk, his adversary may either have the ball replaced or claim a miss.

If a striker whose ball is in hand strikes any ball in baulk without having first played up the table, his adversary may either have the balls

replaced, claim a miss, or claim a foul stroke. If a foul stroke is made while giving a miss, the adversary may treat the stroke as either a foul or a miss. After a foul stroke, the player must allow his opponent to follow

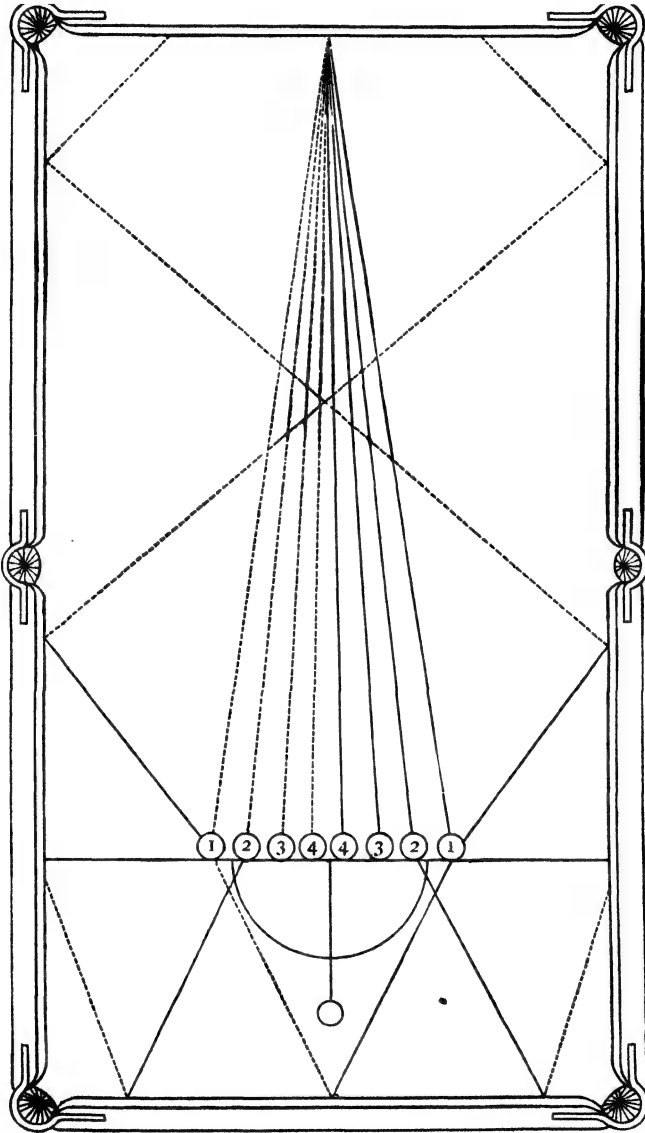


Fig. 632. —Angles of Incidence and Reflection.

[After Hoyle.

on. When a score has been made, the latter must break the balls, and the former also strike from the D. It is entirely at the option of the adversary whether he will enforce the penalty.

If in a following stroke the striker pushes the ball more than once,

any score made by the stroke does not count, and his opponent breaks the balls.

If in moving the cue prior to a stroke a ball is touched and moved, it must be replaced to the opponent's satisfaction, or he may claim a foul stroke.

If in taking aim a player moves his ball, causing it to strike another ball, a foul stroke may be claimed.

If the striker touches any ball with his cue, person, or hand, so that he obstructs or impedes its progress, the balls must be replaced or broken at the adversary's option.

If, when playing, the striker lifts both feet off the floor, it is a foul stroke.

If a player uses his opponent's ball and makes a score, the balls must be broken, and the score is not reckoned. If no score is made, his opponent may choose which ball he will play with, and continue to use it until the game is finished. If the mistake is not discovered before the next stroke there is no penalty. The adversary alone has the right to inform a player that he has used the wrong ball, and if he fails to inform him, the marker is bound to add any points made to the striker's score.

A player breaking the balls must play out of baulk, though it is not necessary to hit the red ball.

Any balls within baulk or "line balls" (on the baulk line) may not be played at if a striker is in hand. He may use the butt of his cue to play up the table.

The red ball at the beginning of every game is placed on the spot and replaced after being pocketed, or forced off the table, or whenever the balls are to be broken. If the spot is occupied by another ball, the red ball must be placed on the pyramid spot, and if that also is occupied, on the centre spot.

If a ball is taken up by either player, unless by the opponent's consent, the latter may have it replaced or have the balls broken; if by any other person, it must be replaced by the marker.

If a player strikes the ball with his cue more than once, he must either play the stroke again or place the ball on the spot which it would have reached if only touched once.

If any ball is forced off the table, or lodges in the cushion, the player gains nothing by the stroke.

If a ball ceases spinning, remains stationary at the brink of a pocket, and then falls in, it must be replaced, and the score made does not count.

All disputes must be settled by the marker.

In the game known as *Pool*, each player has a ball coloured differently from those of his neighbours. The competitors play in succession, each aiming at the previous striker's ball, and endeavouring to pocket his opponents' balls, at the same time placing his own in such a position that it cannot be pocketed by the next player. He who succeeds in doing this wins the contents of the pool, to which each player contributes a fixed number of counters at the beginning of the game.

Each player has three lives which may be lost. If a striker takes a life,

he continues to play until he can no longer score, or till all the balls are off the table, when he places his ball on the spot as at the beginning of the game.

If the player pockets a ball by a foul stroke, the owner of the ball does

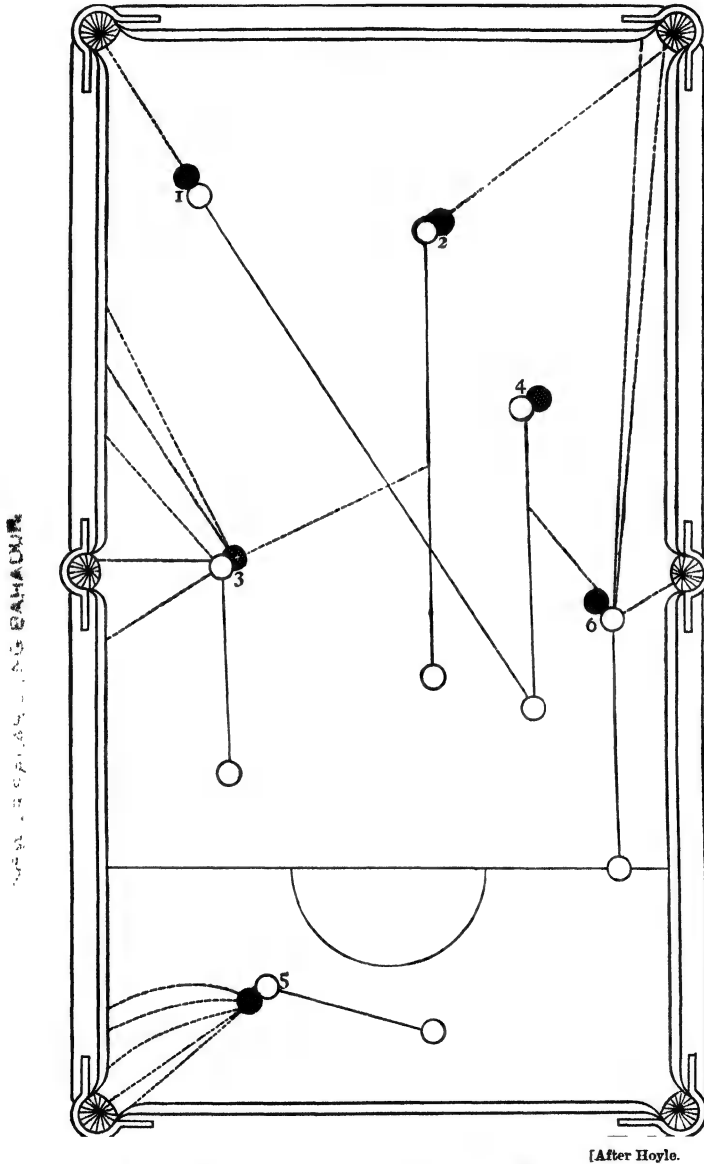
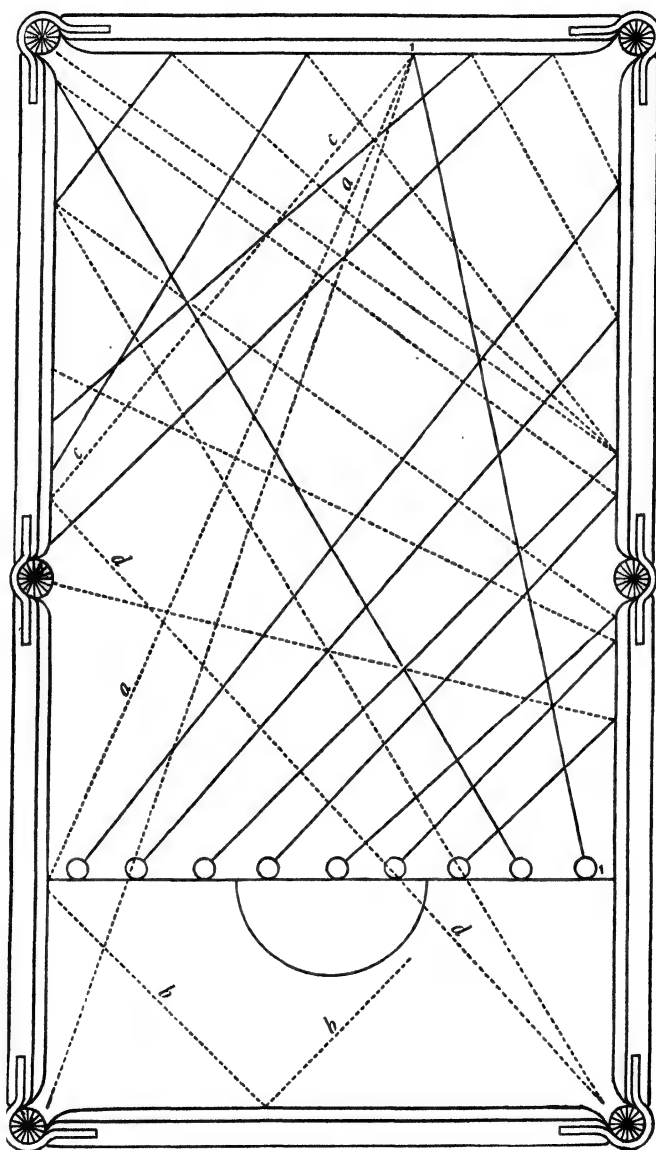


Fig. 638.—Division of the Object Ball. Striker's Ball white; Object Ball shaded.

1. Full ball. 2. Half ball. 3. Three-quarter ball. 4. Quarter ball. 5. Fine ball. 6. Very fine ball.

not lose a life. If a life is lost in any way, the next player aims at the ball nearest to his own; but if his ball is in hand, he plays at the ball nearest to the centre of the baulk line.

If the two balls nearest the striker's ball are equidistant from it, their owners should draw lots to decide which is to be played at. If the striker's ball is touching his object ball, he may play at any other ball instead. If



[After Hoyle.]

Fig. 634.—Angles of the Table.

1. Ball played with moderate strength. *a*, *b*. Harder stroke. *c*, *d*. Harder strokes, the ball struck above the centre.

any ball is in the way of the striker, or his cue, it may be removed during the stroke, but must be replaced immediately, unless his own ball has meanwhile occupied that position, when it must remain in hand.

Whoever first loses three lives may "star", *i.e.* purchase lives equal in number to the lowest number of lives on the marking-board, by a payment to the pool equivalent to that staked at the beginning of the game. Only one star is allowed in a pool, and the last two players cannot star.

The last owner of a life is the winner. When two players are left in who are ties, they either play the game out or share the pool, unless the original number of players did not exceed three. The last striker is entitled to his last stroke before the division.

In *Pyramids*, fifteen red balls are placed on the board in the form of a triangle, the apex of which is the "pyramid spot" midway between the centre of the table and the top cushion. The players use the white ball alternately and endeavour to pocket the red balls, each playing until he fails to score. If either player gives a miss, pockets the white ball, or forces it over the table, or plays a foul stroke, he has to replace one of the red balls on the pyramid spot; if that is occupied, on the billiard spot, and failing that also, immediately behind the pyramid spot. A point is at the same time taken from the player's score, or if he has failed to score, is owed by him. When all the red balls except one are pocketed, the player who has made the last winning hazard continues to use the white ball, and his adversary uses the red. When only two balls are left, if the striker pockets the ball he plays with, or makes a miss, the game is finished, and one point added to the opponent's score.

Parlour Quoits.—Quoits is played with a board, on which there are five numbered pegs, and five rope-rings, which the player endeavours to throw over the pegs from a distance of from 10 to 12 feet from the board. The numbers of the pegs successfully ringed are added together at the end of each player's round; any number of points agreed upon may constitute game. The cost of the requisites averages 7s. 6d.

Buckets is a very simple form of quoits. The rope-rings are aimed to fall into an ordinary wooden bucket. The player scores 1 point for a ring lodging inside, and 3 points for one on either handle.

Bull is played with a board varying in size from 2 feet 3 inches by 1 foot 10 inches to 4 feet 6 inches by 3 feet 9 inches, and costing from 7s. 6d. to 25s. It is marked out in squares, each having a number. The player scores all the numbers which he successfully covers with the rope-rings.

In the game of *Sling-ring* a round board furnished with thirteen numbered hooks is fastened to the wall, and the player is supplied with six india-rubber quoits to cast at the hooks. The price of board and quoits averages 6s.

Ping-Pong.—This game comes into fashion and goes out again in a curious way. When it is not enduring a period of oblivion, it becomes the rage. It is practically the same as ordinary tennis, but is played on a table with parchment rackets and small celluloid balls. The table should not be shorter than 6 feet, and should be about 4 feet wide. The net, which is 6 inches high, is stretched across the middle. As the two courts thus formed are not subdivided as in lawn-tennis, the server may place the ball

at any point in his opponent's territory. If, however, he strike it beyond the table or fail to get it over the net, no second service is allowed, and his adversary counts one point. The service must be delivered from beyond the end of the table, the stroke being underhand. Volleying is not allowed, but a ball may be returned at half-volley. Otherwise the rules, including the method of scoring, are the same as in lawn-tennis. Ping-Pong is a game for two players, but special tables are made with full courts marked for four. The game may also be modified in various ways, so as to permit of a larger number of players being introduced at one time. Table Tennis is another name for the same game.

Skittles.—Skittles may be played in a passage or corridor with nine pins and three balls; the cost of a good set is about 12s. 6d. A diamond-shaped frame costs £3, 15s. If this is not provided, the skittles are set up in five rows, as shown in the diagram, and the player stations himself at about 30 feet from them. His object is to knock down as many skittles as he can at each turn. Each pin knocked down by the ball itself or by another pin counts one point. Any pin knocked down by the rebound from the wall, either of the ball or of a pin, does not count and must be set up again. The players form into two sides, each of which plays alternately until one of them reaches the number of points agreed upon for the game. Another system of scoring allows only 3 throws to clear the board, and if 1 pin or more is left, no score is counted. Clearing the board in 1 throw counts 3 points, in 2 throws 2 points, and in 3 throws 1 point.

Skittle boards averaging 7 feet 6 inches by 2 feet 9 inches cost about five guineas. In playing with these boards the ball is propelled by a cue, as at billiards.

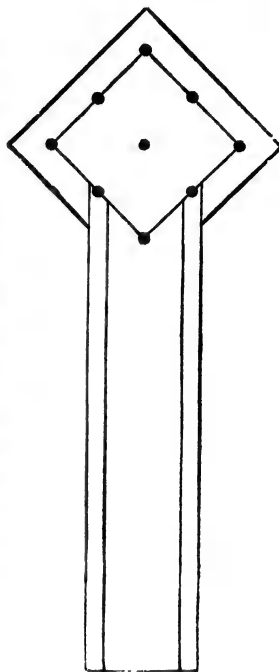


Fig. 625. — Skittles arranged

GAMES OF SKILL.

Backgammon.—Backgammon is a game for two persons played upon a double board with hinges, divided by the "bar" into two parts, called the "outer" and "inner" tables. Each table contains 12 "points" coloured black and white alternately. The players are provided with 2 dice and a box and 15 draughtsmen each, one set white and one black. The object of the game is to move one's men from the adversary's inner table through his outer table into one's own outer table and inner table "home". A man may be moved only on to a point not occupied by two or more of the

opponent's men. The moves are determined by the throws of the dice, each player throwing alternately. The two numbers thrown can be played with the same man or with different men, but in the former case the two stages in the move must be both permissible. If the numbers thrown are the same, each counts double. A single piece on a point is called "a blot", and may be captured by the opponent if he can "hit the blot" by moving one of his own men to that point. The blot is then placed on the bar or division of the table, and the player who owns it cannot move until he makes a throw which enables him to enter his man again in his adversary's inner table. The piece can only be replaced on a point unoccupied by two or more hostile men.

When a player has moved all his men "home", he proceeds to "bear" them, *i.e.* move them off the board. Each cast of the dice

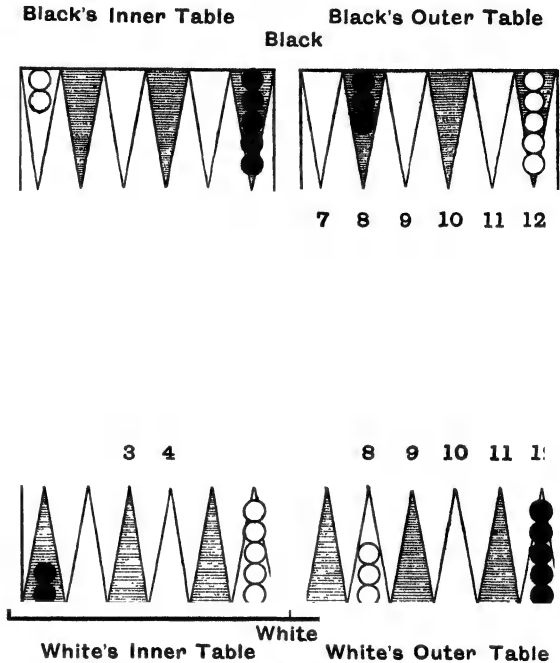


Fig. 636.—Backgammon Board, with the Draughtmen arranged for the Game.

enables him to remove men from points equivalent in number to the throws, or to move men those numbers of points towards the ace point (point 1). If there are no men on a number thrown or any higher number, a man may be borne from the highest occupied point. The first player who clears his inner table wins the game. If the adversary has "borne" any of his men, the winner counts a "hit" (a single); if not, a "gammon" (double). He scores "backgammon" when his adversary has not borne any men, and has been unable to remove all his pieces from the winner's inner table.

Chess.—Chess, a game of great antiquity, and the most intellectual of games of skill, is played by two persons on a draught-board so placed that each player has a white square at the right-hand corner. The object of the game, in which each player moves alternately, is to "checkmate" one's adversary's king, as will presently be explained. Sixteen pieces are used by each player (one set coloured black and one white), of six kinds, each kind moving in a manner peculiar to itself. They are:

(1) The eight pawns (P.), the pieces of least value, called respectively king's pawn (K.P.), queen's pawn (Q.P.), king's bishop's pawn (K.B.P.)

king's knight's pawn (K.Kt.P.), king's rook's pawn (K.R.P.), queen's bishop's pawn (Q.B.P.), queen's knight's pawn (Q.Kt.P.), queen's rook's pawn (Q.R.P.). At his first move each pawn may advance either one or two squares at the player's option, afterwards only one at a time. When a pawn reaches the opposite end of the board he is exchanged for any superior piece (except the king), and most usually for the queen. When capturing another pawn or superior piece, the pawn's move is one square forward diagonally; or he may capture another pawn *en passant*, which in the first move of two squares has occupied the square immediately to the left or right of that which he himself occupies, taking possession of the square which that pawn would have occupied if it had moved one square only instead of two. Alone of all the pieces a pawn must always move forward and not backwards or at right angles.

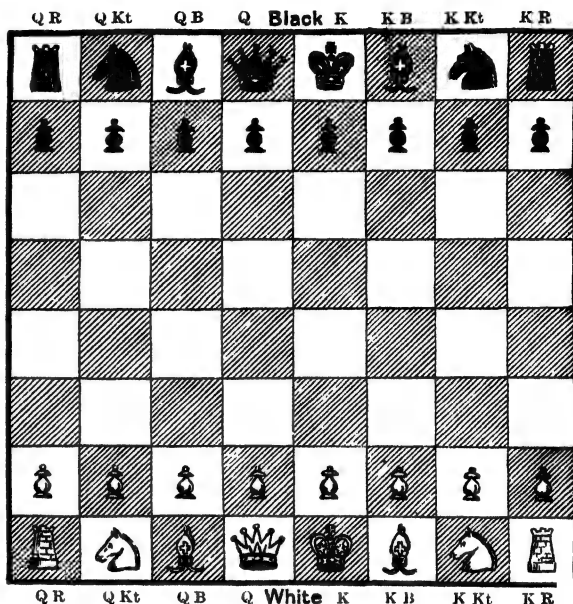


Fig. 637.—Chess-board, with Pieces arranged for play.

(2) The two knights (Kt.), called the king's knight (K.Kt.) and the queen's knight (Q.Kt.). A knight's move is two squares in a straight line, but not diagonally, and then one at right angles, so that he invariably rests on a square differently coloured from that from which he starts. He alone of all the pieces may leap over any man in making his move.

(3) The two bishops (B), called the king's bishop (K. B.) and the queen's bishop (Q. B.). They move diagonally any number of squares, and therefore always rest on a square of similar colour to the one started from.

(4) The two rooks (R), called the king's rook (K. R.) and queen's rook (Q. R.). A rook may move any number of squares at a time in a straight line, but not diagonally.

(5) The queen (Q). This is a very powerful piece, able to move any number of squares at a time in a straight line, and without the restrictions as to direction limiting the moves of the rooks and bishops.

(6) The king (K). This piece cannot be taken, but may not move into "check", i.e. into a position where if he were another piece he could at once be taken by a hostile piece. No other piece belonging to the same side may be so moved as to leave the king in check, and if put in check by

the move of a hostile piece he must at once, if possible, move or be put out of it by another piece; if he is unable to do so, and no other piece of the same side can be so moved as to put him out of check, that side loses the game. Hence it is possible, though it is more difficult, for a player to win with fewer and less valuable pieces on the board than his opponent. The king may move in any direction, but one square only at a time, except once during the game, when he "castles", that is, the king and rook are allowed to cross each other, the rook being brought to the side of the king, and the king then moved to the other side of the rook. Castling is only permitted if neither piece has moved previously, and if the king is not in check. When a king, though not in check, cannot move without going into check, and no other man can be moved, it is called stale-mate, and the game is drawn.

Any piece except a pawn moves in the same way in taking a piece as at other times, and occupies the position of the piece taken, which is removed from the board.

Dominoes.—There are about as many different methods of playing dominoes as there are varieties of card games; but the most popular are known as the "block" and the "draw" games, for two or four players. The twenty-eight oblong bone or ivory pieces called "cards" are laid face downwards on the table and well mixed. Each player draws one; and if four persons are playing, the two highest compete against the others, and the lowest of all wins the "pose" (lead). In the block game each player draws seven pieces from the stock, leaving (if only two play) fourteen on the table to form the reserve. The winner of the "pose" lays down a domino face upward. The next player must match it at one end or the other with a card from his hand; and so on alternately. If one is unable to play, he calls "a go", and loses his turn. If neither can play, the game is said to be blocked. The first player who succeeds in playing out all his cards calls "domino" and wins the round, scoring the number of pips on the cards his opponent still holds. The game is usually fifty or one hundred up.

The draw game differs from the block game in one essential only. When a player cannot match from his hand, he may draw a domino from the reserve if he pleases. If the card is unsuitable he must take it into his hand. A rule sometimes enforced is that a player who commences to draw from the reserve must go on drawing from it until a suitable card turns up. In either case the dominoes must be retained by the player.

Draughts.—Draughts is a game for two persons, played on a board with sixty-four squares, coloured light and dark alternately. The pieces consist of two sets of twelve wooden or ivory discs, coloured usually black and white respectively. They are arranged on the white squares if the lowest corner square at each player's right is black, and *vice versa*, and except when taking the opponent's pieces can only move one square at a time in a forward diagonal direction. The players, moving alternately, endeavour to take each other's men, or block them so that they cannot

move. A capture is accomplished by passing over a hostile piece occupying a contiguous square into a vacant square immediately behind; and several pieces may be taken at a time, provided there is such a vacant square behind each. The movement of capture is also diagonal and forward. When a man reaches the last row on the adversary's side of the board he is "crowned" king by having another piece placed on top, and may

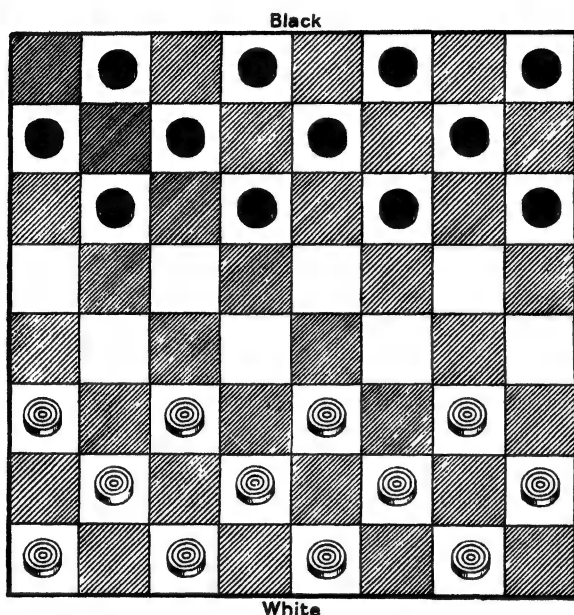


Fig. 638.—Draught-board: the Pieces arranged ready for play.

In England the board is arranged as above, with a black square at the right-hand corner nearest each player, the play being on the white squares; but in Scotland the board is placed with a white square at each right-hand corner, and the play is on the black squares.

In the *Losing Game*, or *First Off*, all the men are used and the board is dressed as for draughts. The object of play, however, is to get all one's men taken by one's opponent before one has been compelled to take all his men. The game gives scope for considerable ingenuity.

In *Go Bang* the object is to get a straight line of five men in any direction, all the squares of the board being used. In the first stage the two players alternately place a man on any vacant square, until all the twenty-four men are on the board. With players of any experience neither is likely to get a line of five at this stage. The second stage consists in the alternate moving of a man by each player one square in any direction, and this stage is completed when one player gets his line of five. A player who manages to get a line of three with both ends open will obviously win if his opponent neglects to block one end of his line. A player should have men all round the free ends; otherwise he may find that his opponent secures a winning position with ease.

then move backwards as well as forwards. The "huff" or "blow" is the right exercised by a player, before moving himself, to take an opponent's piece which did not take one of his men, though in a position to do so. If he prefers he may request his adversary to revoke his last move and make the capture. If, however, the latter in that move took a piece, he is not liable to either penalty.

Draught-board Games.—The draught-board and the draughts men may be used for playing several other games that form an agreeable change from draughts.

In *Fox and Geese* a player with four men of one colour, representing the geese, tries to hem in a single man of the other colour, representing the fox, played by his opponent. The four geese are placed at the start on the four black squares nearest their player, and the fox on any other black square. The geese can only move like uncrowned draughts men, one at a time, but the fox moves like a crowned man. No taking is allowed. The geese, if properly played, can always win.

Halma.—Halma is played on a board having 256 squares. At the four corners a "yard" of thirteen squares is enclosed, in which are placed the thirteen men owned by each player. Each may play against all, or two adjacent players combine as partners to play against the others. An additional line, taking in six extra squares, is added at two corners for a game in which only two persons play, each having nineteen pieces. Each player in turn moves one piece by either a "step" or a "hop". A step is a move of one square in any direction except backwards. A hop may be taken over any piece, one's own or an opponent's, and continued with winding or zigzag movements over any others, provided there is a vacant square behind each piece to touch *en route* or rest in, and that no move is in a backward direction.

As the object of the game is to be the first to pack one's men into the opposite yard, one should endeavour to form ladders for back pieces to hop over, being careful to block them against the opponent's pieces, while making use of his ladders if possible.

Reversi.—Reversi is a game played on a draught-board by two persons, each provided with thirty-two counters, which are coloured red on one side and black on the other. The first player puts a counter in one of the centre squares red side up, the second follows suit, using the black side of the counter, and this move is repeated, the four centre squares being first occupied, after which each player must alternately place a counter on a vacant square next to one of his opponent's counters in such a position that he can reverse one or more of the latter's pieces. This can only be done when the hostile counters lie in a straight unbroken line between one of the player's counters and a vacant square on which he can place another piece. If a player cannot follow this rule he loses his turn until there is a suitable square vacant next to one of his opponent's pieces. When the players have played all their counters, and the board is covered, whoever owns most counters wins the game.

Solitaire.—Solitaire is a game or problem for one, played on a board of thirty-three holes arranged as shown in fig. 639. Each hole is occupied by a small glass ball. The method of play is to remove one ball, and then to clear the board of all the remaining balls but one by a succession of moves like the captures in draughts; that is to say, a ball is lifted over another into a vacant hole immediately beyond, and the ball passed over is then removed from the board. Usually the ball left at the finish is required to be in the hole first made vacant, or several balls may be required to remain in defined positions forming special geo-

metrical figures. For example: Required to remove the centre ball at the start and to leave the last ball in the centre. Let the holes be numbered thus:—

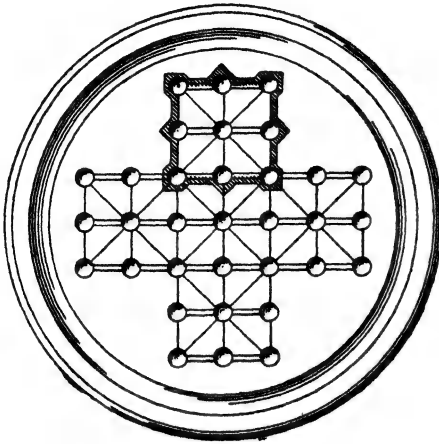


Fig. 639.—Solitaire and Tactics Board.

	1	2	3			
		4	5	6		
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
		28	29	30		
		31	32	33		

The moves are then as follows:—
 5-17, 12-10, 3-11, 18-6, 1-3-11,
 30-18, 27-25, 24-26, 13-27-25,
 22-24, 31-23, 16-28, 33-31-23,
 4-16, 7-9, 10-8, 21-7-9, 24-10-
 8-22-24-26, 19-17, 16-18, 11-25,
 26-24, 29-17.

A solitaire board is now usually arranged so as to be suitable for another game of more recent origin, called Tactics. One person plays two officers against another with 24 men. The men can move only by advancing along the single lines, the officers along any lines, either advancing or retreating. The men can be taken, but not the officers. The men win if they succeed in taking possession of the nine top holes; the officers if they reduce the men to eight, or make them unable to move.

CARD GAMES.

All Fours.—All Fours may be played by two or four persons with a pack of fifty-two cards. The players cut for the deal; *i.e.* each takes a few cards from the top of the pack, turning up the undermost. He who cuts the highest card deals. Six cards are dealt to each player, and the thirteenth or twenty-fifth card, as the case may be, is turned up for trumps. If the turn-up is a knave the dealer scores 1 point. The game contains four chances—"high", the highest trump out, the original holder of which scores 1 point; "low", the lowest trump out, the original holder of which scores 1 point; "jack", the knave of trumps, for which 1 point is scored by the player who holds it at the conclusion of the game; "game", for which 1 point is scored by the player who can, at the end of the game, show the highest reckoning by cards won in tricks, counting 4 for each ace, 3 for each king, 2 for each queen, 1 for each knave, and 10 for each ten. If two players have an equal reckoning, the one nearest the dealer's left hand scores the point for "game". If no player has court cards or tens, the elder hand (the player immediately on the dealer's left hand)

scores the point for game. If only one trump is out, points for both "high" and "low" are scored by the player who holds it.

If the elder hand dislikes his cards he says "I beg". In that case either he is allowed to score 1 point, or three more cards are dealt to each player, and the next card is turned up for trumps. If it is of the same suit as the former turn-up, each player receives three more cards, and so on until there is a change in trumps. Only the elder hand has the privilege of "begging", and he may do so only once. Players must follow suit or trump if possible, and the highest card of the same suit wins the trick unless it is trumped. The game is usually 7 points.

Bézique.—Bézique is usually played by two persons with two packs shuffled together, all cards under seven being discarded. An extra pack must be supplied for each additional player. When more than two play, all compete against one another, or sides may be formed. The highest cut wins the deal. Eight cards are dealt to each; the next card—the seventeenth, if there are only two players—is turned up for trumps. If it is a seven the dealer scores 10. After a trick has been won by the holder of a seven of trumps he may exchange that card for the turn-up, and score 10.

The cards rank in the following order:—ace, ten, king, queen, knave, nine, eight, seven. The highest card of a suit or a trump wins the trick, but it is not compulsory to follow suit. The winner of a trick has the lead for the next trick, but before playing he draws the top card of the stock or remainder of the pack not dealt, his opponent taking the next. The turn-up card, or a seven replacing it, is treated as the bottom card of the stock.

If a player can "declare" he does so immediately after winning a trick, and before drawing a card. A "declaration" is made by laying face upwards on the table any one of the following combinations—four aces, 100 points; four kings, 80; four queens, 60; four knaves, 40; a "royal marriage" (king and queen of trumps), 40; a "marriage" (king and queen of common suit), 20; "bézique" (queen of spades and knave of diamonds), 40; "double bézique" (two queens of spades and two knaves of diamonds), 500; sequence (the five highest trumps), 250. Only one declaration can be made at a time. A royal marriage may not be counted after a sequence including it, though it may before. Cards once declared cannot be used in other combinations of the same kind. Kings and queens that have formed part of a four-king or a four-queen declaration cannot be afterwards used for marriages. All cards declared are, of course, available in the ordinary play.

When all the cards of the stock are drawn, the players take into their hands any cards that they may have declared, and no further declaration can be made. The last eight tricks are then played out. At this stage it is compulsory to follow suit, or, if that is not possible, to trump. The winner of the last trick scores 10. The players next count up all the aces and tens they have won in tricks ("brisques"), and score 10 for each. The game is 1000 up. If it is won by 500 or more than 500 it is called a "double", counting two towards the *partie* or set of three games which

must be won. When four play partnered, two against two, a player may make a declaration after his partner wins a trick. When three play, triple bézique scores 1500, and the game is 2000 up.

Polish Bézique.—In Polish Bézique all aces and court cards, and also the ten of trumps won in play, are placed on the table face upwards and used in declarations along with cards in hand. A declaration can be made only after a trick is won, and one card at least of the trick just won must form part of the combination declared. Any number of declarations may be scored at the same time, but no card can be used in more than one declaration of the same kind. Declarations can be made during the play of the last eight tricks. Brisques must be scored as soon as won. The game is 2000 up.

Rubicon Bézique.—This form of bézique has become very popular. It is played with four packs containing the same cards as in ordinary bézique, but nine cards are dealt to each of the two players. No trump is turned, but trump is determined by the first marriage or sequence declared. As soon as the cards are dealt, either player may score *carte blanche*, counting 50, if he has no court card in his hand. If a player claims this score he must deal out his cards one at a time, face up, but as quickly as possible, to satisfy his adversary of the correctness of his claim. *Carte blanche* may be scored after every trick, so long as a court card is not drawn, but the drawn card must be shown at each score. The method of play is the same as in ordinary bézique and the declarations are the same and of the same value, with the addition of triple bézique (1500) and quadruple bézique (4500). A card can count towards any number of declarations of the same kind, but only one declaration can be scored at a time, although declarations may be made at any time. The last nine tricks are played like the closing stage of ordinary bézique, and the last trick of all counts 50. The game is won in one hand and is scored thus:—If A has 1460 points and B 1190, A wins, and the game is worth $1400 - 1100 + 500 = 800$ points. If the loser has less than 1000 points he is rubiconed, and the winner counts the hundreds in both scores $+ 1000 + 300$ for the brisques. The brisques are not counted when both players pass 1000, unless the scores are equal or nearly so, or unless the loser can pass 1000 with their aid.

Bridge.—Bridge is now one of the most popular of card games, although it is only of comparatively recent introduction. It is played by four players, partnered as at whist, with the whist pack. The cards are cut and dealt as in whist, but no card is turned up. After trump is declared according to the method about to be explained, the player on the dealer's left leads, and then the dealer's partner lays his cards face upwards on the table. The hand is then played out as in single-dummy whist, the dealer's partner standing out from the round, but watching that the dealer does not win from one hand and then lead from the other. The game differs from whist in the mode of determining trumps and in the scoring. Before any card is played the dealer may declare any suit

trumps or elect to play with no trump suit; if he does not wish to declare, he asks his partner to do so. His partner must then make one of the five possible declarations, and by that all the players are bound. When spades are trumps, each trick above six won counts 2 points to the winners; when clubs, 4 points; when diamonds, 6 points; when hearts, 8 points; and when no trumps is declared, each winning trick counts 12 points. The adversaries of the dealer have the right, if they please, to double the value of the declaration; if they do, the dealer or his partner may redouble; and in that event the adversaries may again redouble; but in no case can the value of a trick exceed 100. Thirty points make a game. Honours in trumps (ace down to ten, inclusive) in hand count towards the value of the game won but not towards winning the game. The scoring of honours is best omitted, as usually in ordinary whist, when there are no stakes. The method of scoring them is somewhat intricate, and must be sought in special books. The same may be said of Grand Slam, when all the tricks are won by a side, and Little Slam when all but one are won.

The best declaration is no trumps, and after that a red suit. The dealer, if not strong enough for any of these, will almost always pass the declaration to his partner instead of declaring a black suit; with a hopelessly weak hand he may declare spades, to prevent his partner from inviting disaster by a higher declaration. There are various guides in declaring, but experience will show best what can be done. For no trumps four tricks in hand are required. The Robertson rule in a simplified form reads thus: Count 1 for a ten, 2 for a knave, 3 for a queen, 5 for a king, and 7 for an ace, and declare no trumps with 24 or more. Generally with four honours in either red suit, and not four aces, the red suit is a better declaration than no trumps. A red-suit declaration may be made with six, including one honour; or five, including two honours; or four, all honours. But there must be something of value in other suits, in the first two cases at least. The dealer's partner will not declare no trumps unless he has rather greater strength than would have justified the dealer in declaring it. A declaration should not be doubled, except in spades, without great strength. If a spades declaration is not doubled, the declarers are often allowed to count the odd trick without playing. Declarations may be affected by the state of the score.

Cassino.—Cassino is played with a pack of fifty-two cards, preferably by four players, though any number up to twelve may play. The highest cut wins the deal. Each player receives four cards at each round; and after the first round, but not after any others, four cards (the *lay-out*) are laid face upwards on the table.

Each person plays one card at a time, with which he may take not only every card of the same denomination on the table, but every two or more cards which, combined, show an equivalent number of pips. Court cards can only be paired. The cards that are taken up must be laid aside and not played again.

If possible a player endeavours to "clear the board" by matching all the centre cards, for which "sweep" he scores 1 point. If at any time during the game, or in consequence of a clear board, a player is unable to match or "build up", he places his card in the centre. A player can only "build up" when he is able to head his opponent's lead with another card, the combined number of pips shown on the two cards being equal to the number on one which he holds in his hand. Thus, A plays a two, which B heads with a three, calling out, as he does so, "fives", having a five in his hand with which he hopes to take the trick. A, however, may place a five on top, calling "tens", and win the trick with a ten he holds. The centre cards may be requisitioned to continue a build "from the table".

A player may "call" when he holds two or more cards of the same denomination as at least one card on the board, *i.e.* he lays down one of them, naming it in the plural—"threes" for instance—and by so doing prevents his adversary from taking those cards with a card of any other denomination—a six in this particular case.

The game continues until the stock is exhausted, when the winner of the last trick takes up any cards left on the board. The cards in the possession of each player are reckoned up, and points scored as follows:—great cassino (the ten of diamonds), 2 points; little cassino (the two of spades), 1; the cards (having a larger number than one's adversary), 3; spades (having a majority of this suit), 1; aces, each 1; "sweep", 1.

The player who first scores 11 points wins the game.

Catch-the-Ten.—This is a favourite card game in Scotland. It is played usually by three or four persons with a pack from which all below six have been omitted. When four play they are partnered two and two as at whist. Before dealing, trumps are determined by a cut, and then the cards are cut for the dealer. In the trump suit the order downwards is knave, ace, king, queen, ten, and so on to six; in other suits as in whist. The hand is played out and tricks won as at whist. At the close of the hand each player counts 1 for each card won above the number dealt to him at the start, and also for honours in trump won, as follows:—knave, 11; ace, 4; king, 3; queen, 2; ten, 10. The ten, though of greater value than the ace, king, or queen, can be taken in play by any of these as well as by the knave. The game is 41 points. The game can be played by six players with a pack from which the two's are omitted, alternate players being partnered in two groups of three.

Cribbage.—Cribbage is played with a pack of fifty-two cards, preferably by two players. The lowest cut wins the deal, ace counting lowest of all. The dealer shuffles and his adversary cuts the cards; and from the heap which would have been undermost, if the pack had been reunited, the former deals five cards to each. The remaining cards of the section he has dealt from he places on top of the other heap.

Both players select two cards from their hands to form the "crib". These four cards are the property of the dealer, and are laid aside face downwards until the end of a round. The elder hand then removes a

few cards from the top of the pack and the dealer draws the uppermost card of the remaining heap. The former replaces those he has lifted, and the card drawn is then placed face upwards on top of all. If it is a knave, the dealer scores "2 for his heels".

The elder hand plays, at the same time calling the value of his card, and the dealer either matches it with another of the same face value, scoring 2 for "a pair", or plays a card the pips of which added to those on his adversary's card count fifteen, or as near that number as possible, either more or less. If he succeeds in making exactly fifteen, he scores 2. The elder hand then endeavours again to match, or to increase the number of pips to thirty-one or as near that number as possible, but not more than it. The dealer follows in like manner if the sum-total is not yet thirty-one. A player who is unable to make exactly or less than that number cries "go", and his opponent plays any card or cards he can, scoring 2 points if he makes exactly thirty-one, and 1, if he makes less.

The players next reckon up the combinations contained in their hands, the elder first, and afterwards the dealer, who possesses a second hand in the "crib". The turn-up card may always be included to form any of the following combinations:—every two, three, or four cards which together make fifteen, 2 points; a pair (two cards of any sort), 2; a pair royal (three cards of any sort), 6; a double pair royal (four cards of a sort), 12; a flush (three cards of a suit), 3; a full flush (four cards of a suit), 4; sequence of three or four cards, 3 or 4; knave of trumps in hand, "1 for his nob". Game is 61 points, the score being marked up with pegs on a board having sixty holes on either side.

In three-handed cribbage all the players are against one another, and each contributes only one card to the crib, the fourth being added from the pack after the deal. If four persons play, they enter into partnerships of two each, and each player contributes one card to the crib.

Écarté.—Écarté is played by two persons with a pack of thirty-two cards, all under seven being discarded. The cards rank in the following order:—King, queen, knave, ace, ten, nine, eight, seven. The highest cut wins the deal, and each player receives first three and then two cards, or first two and then three, making five in all. The eleventh card is turned up for trumps; should it happen to be a king, the dealer scores 1 point, calling out as he does so "I mark king". The holder of the king of trumps scores 1 point, provided he declares it before the first trick has been completed.

If the elder player is dissatisfied with his hand he exclaims: "*Je propose*", meaning that he desires to exchange any or all of his cards. If the dealer also wishes to discard, he accepts the proposal by asking "How many?" and then dealing to his opponent the required number, and exchanging as many as he requires himself. The écarté (rejected) cards are laid aside. Discarding may be continued until one or other player declares himself satisfied, or until the "talon" is exhausted. If the elder hand does not propose, the dealer cannot discard; and the dealer

can refuse the elder hand's proposal. The elder hand then leads. Suit must be followed, and the trick must be headed, if necessary by trumping, when possible.

Five points constitute game. The winner of three or four tricks wins the *point* and scores 1, and of all the tricks ("*la vole*") 2. If the elder hand plays without proposing, the point counts 2 to the dealer; if the dealer refuses the elder hand's first proposal, the point counts 2 to the latter.

The important thing in *écarté* is to know the *jeux de règle*, or hands that can be played without proposing. If you cannot discard three cards without putting away a trump or a king, don't propose, unless you hold the king of trumps, when you almost always propose; other *jeux de règle* must be sought in books on the game.

Euchre.—This favourite American card game is supposed to have developed from *écarté*. It is played with the *écarté* pack (all below seven discarded), or often with a pack from which all below nine have been discarded. The cards count in whist order in plain suits, but in trumps the highest card is the knave ("right bower") and the second highest the other knave of the same colour ("left bower"), the others following in whist order. Euchre packs often include a special card called the "joker", which is always reckoned as the highest trump. Euchre is usually a game for two, but may be played by three or four. For two the procedure is as follows. Five cards are dealt to each player by three and two, and the eleventh card is turned up. The non-dealer, if strong, will "order it up", that is, make the dealer exchange one of his cards for the turn-up. By ordering it up he undertakes to win at least three of the five tricks with the turn-up suit as trumps. If the non-dealer passes, the dealer may take up the turn-up card and put down one in place of it, or he may pass and turn down the exposed card. In the latter case the non-dealer has the option of naming another suit as trumps and taking the majority of tricks in it, or of passing again. If the former, the dealer has the same option. If both pass, the cards are dealt afresh. When trump has been determined, and one player has challenged, play begins by the non-dealer leading out a card. Suit must be followed, but it is not obligatory to win a trick. The challenger who "makes the point" by winning three or four tricks counts 1; if he wins all five tricks ("the march") he counts 2. If a challenger fails to get three tricks he is said to be "euchred", and his opponent counts 2. The game is 5 points. The left bower counts for every purpose as a trump card.

Loo.—Loo is an old game played in two or three forms, usually with the full pack of cards. In three-card loo, now the most popular variety, any number may play. The dealer lays down three counters to make a pool, and then deals three cards singly to each player, and also an extra hand known as "miss". The top card of the undealt portion of the pack is turned up for trump. Each player has then in turn, beginning with the one on the dealer's left (the elder hand), the option

of "standing", that is, playing the hand dealt to him, or taking up the "miss" cards in place of his own, or throwing up his hand altogether for the round. If all throw up their cards the dealer takes the pool. If all but one throw up, and that one stands, the dealer may stand or take the miss; if he does not wish to do either he must play the miss, and put his winnings, if any, in the pool. If all throw up but one and that one takes the miss, the dealer may play or throw up; in the latter case the holder of miss takes the pool. These preliminaries over, play begins by the elder hand leading a card. If he holds the ace of trumps he must play it; so with the king, if the ace is the exposed trump. If he has two or three trumps he must play the highest. Other players must follow suit, and must head the trick, if necessary by trumping, if they can. The winner of the first trick leads for the second trick, by a trump if he can, and subject to the same rules as for the first trick. The lead for the third trick follows the rules for the second. When the three tricks are played the pool goes to the winners of tricks, one-third for each trick. Each player who did not throw up his hand and yet won no trick is loosed, and has to pay to the new pool a definite number of counters, either the same as the original pool or twice it. The loos, with the new dealer's contribution, make the new pool. Every breach of the rules is punished by loosing. It is sometimes agreed that when a club is turned up for trump all must stand by the hand dealt.

In five-card loo five cards are dealt to each player and there is no "miss". Each in turn may choose to play or pass. Those choosing to play may exchange any or all of their cards for others from the stock, but only one exchange is allowed. The method of play is the same as in the three-card game, but the knave of clubs, called "Pam", is always the highest trump. The holder of a flush, that is, of five cards of one suit, or four of one suit and Pam, declares it after all have decided to play or pass, and clears the pool. Of several flushes a trump one takes precedence; of two in plain suits, the one of higher point value wins. The holder of a losing flush or of Pam is not loosed. When the ace of trumps is led the leader of it usually says: "Pam, be civil", in which case the holder of Pam must pass the trick, if he can do so without revoking.

Napoleon, or Nap.—Nap is a favourite round game, played usually with the full pack by any number of players from two to six. Five cards are dealt to each player, after which the player on the dealer's left has the option of undertaking to make a definite number of tricks, if allowed to choose the trump suit and lead the first card. Two at least must be called, and any call made may be superseded by a higher call made by a later hand, the dealer having the last chance. The highest call possible is Nap, which is an undertaking to win all five tricks. The first card led by the highest caller determines the trump suit. Suit must be followed if possible, but there is no obligation to win the trick. If the challenger fails to win the number called, he pays to each of the

quint major, quint to a king, quint to a queen, and quint minor; Quart, counting four, of five kinds; and Tierce, counting three, of six kinds, the lowest tierce minor (nine, eight, seven). A longer sequence ranks above a shorter, and in the case of two of equal length that with the higher top card is the better. A Quatorze consists of the four cards of any denomination not lower than ten, and a Trio of three such cards. The former counts fourteen, and the latter three.

The order of scoring the combinations is important. The elder hand (non-dealer) calls his point, and the dealer, if unable to head it, says "Good", whereupon it is shown and scored. If the dealer can head it he says "Not good", but does not show or score his better one till afterwards. If the dealer has an equal point he replies "Equal", and neither scores. The non-dealer then calls his best sequence, the dealer replying as before; the holder of the best sequence scores all his sequences, but the dealer not till afterwards. The non-dealer then calls his best quatorze, or, failing a quatorze, his best trio, and if good he scores all his quatorzes and trios. The non-dealer then leads a card and counts one for it if it is at least ten, and then the dealer, before playing to the trick, scores his hand.

When a player can score 30 points by his hand before his opponent has scored 1 he wins the "*repique*", i.e. he scores 90 points instead of 30. With the exception of the quatorzes and trios, all combinations, as well as the "point", must be shown so that their value may be seen, and in the case of ties in any of these combinations neither player scores.

When the hands have been reckoned the play begins. Players must, if possible, follow suit, and the highest card of a suit wins the trick. There are no trumps. The winner of a trick leads to the next, counting 1 if the led card is above nine. The non-leader also counts 1 if he wins the trick. The winner of the last trick scores 1, and the winner of the majority of tricks counts 10 for the "cards". The winner of all twelve tricks counts 40 for "*capot*" instead of the 10 for the "cards". The game is 100. When a player can reckon 30 by his hand and play before his opponent can score 1, he wins the "*pique*" and scores 60 instead of 30.

Rubicon Piquet, a more popular form now, is related to the older game as Rubicon Bézique to Bézique.

Poker.—This is almost entirely a gambling game, unsuitable for detailed description here.

Pope Joan.—Pope Joan may be played by almost any number of persons with a pack of fifty-two cards and a board specially sold for the purpose. The board, which is divided into eight compartments, is "dressed" by the dealer; that is, he distributes among several compartments either fifteen counters of his own, or fifteen contributed by the players as agreed upon. On the ace, king, queen, knave, and game are staked 5 counters, one on each; on matrimony (king and queen of a suit), 2 counters; on intrigue (knave and queen of a suit), 2 counters; and on pope (nine of diamonds), 6.

The eight of diamonds is rejected from the pack, and the rest of the

cards are dealt face downwards to the players, a spare hand being set aside to form the "stops". The last card is turned up for trumps, and should it happen to be any one indicated on the board the dealer claims the stake allotted to it. If he turns up pope, he takes the stakes on pope and on game, and receives a counter from each player for every card dealt to him. The four kings and the seven of diamonds are fixed "stops", beyond which no sequence can proceed, and the dealer alone may refer during

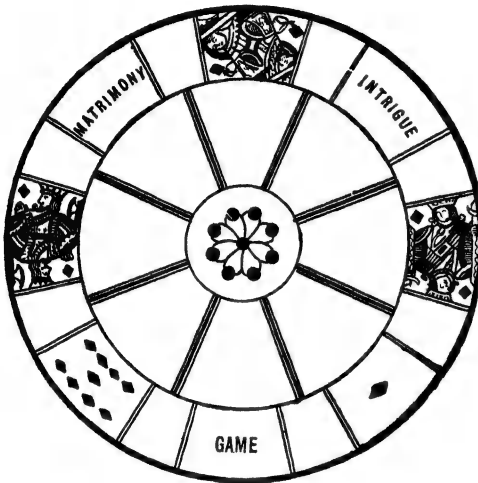


Fig. 640.—Pope Joan Board.

the game to the spare hand to discover which other cards are "stops" also. For example, if the ten of hearts is in the spare hand, the nine of that suit is a "stop". Unless the game is determined by the dealer turning up pope, the player on his left hand begins by laying down a card, preferably of the longest sequence he holds. The player who has the next highest card in the sequence follows, and so on until a "stop" card is played. The holder of it leads next. When a player holds any card or combination marked on the board he may only claim the

stake on it, provided he has played out such card or cards. The first to play out all his cards claims the stake for game as well as one counter from each player for every card still in hand. The player who holds pope still unplayed is exempt from the penalty.

Solo Whist.—Solo whist is played with the full pack by four players. The cards are dealt three at a time for four rounds, and then a single each, the last of all being turned up to determine the trump suit. It is preferable to determine trumps by a cut before the cards are cut for the deal. After the deal the elder hand, or player on the dealer's left, may make any one of the six calls allowed in the game, or may pass. The next player has then the option of making a higher call, and so on to the dealer. A player who passes cannot call again, but one who calls may, if overcalled, make a still higher call. The elder hand, however, even if he passes, is permitted to accept another player's proposal. The highest call made is the one played. The following are the six calls of the game, in ascending order of value:—

1. *Proposal*.—This means that the player making it undertakes along with an acceptor to make eight tricks against the other two.
2. *Solo*.—An undertaking to make five tricks alone.
3. *Misère*.—An undertaking to make no tricks. No trumps.
4. *Abundance*.—An undertaking to win nine tricks alone, with choice

dealer also takes a card or cards from the stock if he requires to do so, and when content says: "I stand". The players—those who have not overdrawn—then lay their cards face downwards on the table, and the dealer pays single stakes to those whose cards are nearer twenty-one in value than his own, and double to the holder of a "natural", i.e. a court card or ten and an ace. If the dealer has a "natural" he receives double stakes from all (except the holders of a "natural", who pay single stakes), and if he has not a "natural", single stakes from all the players who hold a less number than himself. Ties pay the dealer. Before dealing round the second card he may cause all the players to double their stakes. When a "natural" is declared, the deal passes to the holder of the "natural" or to the next player on the dealer's left, as may be arranged.

A round of ordinary vingt-et-un may be succeeded by seven variations, the deal not changing hands until all these have been played out.

Imaginary Ten.—Each player adds ten pips to his first cards, and may either decline or take another card as he sees fit.

Blind Vingt-et-un.—The player stakes before receiving two cards, and must either stand or take one or more cards before examining his hand.

Sympathy and Antipathy.—The player stakes on the chance of receiving, in response to his call for either sympathy or antipathy, two cards either similar or dissimilar in colour.

Rouge et Noir.—The player stakes on his chance of receiving, in response to his call, either rouge or noir, a red card or a black.

Self and Company.—The dealer lays two cards on the table, face downwards, one for "self" and one for "company". The players stake on "company". If the two cards are a pair, the dealer wins. If not, he deals the cards face upwards until one pairs with the card of either self or company, receiving in the first instance or paying in the other.

Pips.—The dealer gives each player two cards. He pays one counter for each pip to the players who have more, and receives from those who have fewer pips than himself.

Clock.—Players stake all round. Thirteen cards are dealt from the pack face upwards in a heap, the dealer counting up to ten, then knave, queen, king, as he lays down the cards. If a card turns up corresponding to the call, he wins all the stakes. If not, he pays each player.

Whist.—Whist is the premier card game, and has been the subject of exhaustive analysis by many able men. In its general conception and method of play it is extremely simple. The full pack of fifty-two cards is used, and in each suit the cards rank in value from ace, through king, queen, knave, and ten, down to two. Four players take part, playing two against two, each player facing his partner. The deal falls to the player who cuts the lowest card, the ace ranking lowest for this purpose. The pack is shuffled by the dealer and cut by the player on his right, and the cards are then dealt out one at a time, beginning with the player on the dealer's left. The last card falls to the dealer and is turned up, its suit

being trumps for that hand. Frequently trump is determined by a cut before the cut that precedes the deal; in this way the position of no card is made known to all. Let us call the dealer X and his partner Y, the dealer's left-hand adversary A, and his right-hand adversary B. The numbered cards are denoted by their numbers, the honours being denoted by A (ace), K (king), Q (queen), and J (knave or jack) respectively.

When the deal is completed A leads any card, Y follows with one of the same suit, then B, and finally the dealer. The highest card played wins the trick, which is gathered in by the winner's partner, while the winner leads a card for the second trick. A player must follow suit if he can; if he does not, he makes a revoke, for which the penalty is the loss of three tricks. If a player cannot follow a plain suit, he may play a trump card or throw away one of another plain suit. Trumps take all plain-suit cards. Six tricks won by one party make a "book", and every trick beyond counts 1 point. If one side has at the close only seven tricks to the six of the other, the former has won "the odd trick". Honours (A, K, Q, J of trumps) are often not counted; but if they are, the following is the method. Four on one side count 4 points; three on one side count 2 points; when equally divided, neither counts. Five points constitute a game. If the losing side has scored 3 or 4, the game is single; if 1 or 2 only, it is a double; if none at all, it is a treble. The majority of three games won gives 2 points extra for the rubber.

The Lead.—In modern whist co-operation between partners is made the basis of a highly elaborate system of play. A player seeks to establish his long suit, that is, the suit of which he has most cards at the start, and to assist his partner in establishing his one. An original lead from trump is never made except from five or more, but a plain-suit lead is usually from four. If a player has two equally long suits, he chooses the stronger of them to lead from. The question of which card to lead from a long plain suit has been exhaustively discussed, and definite rules are laid down in the manuals. Lead K from A, K (with others, of course) and K, Q; A from A, Q, J, or A and four or more small cards; Q from Q, J, 10; 10 from K, J, 10; in most other cases lead a small card, generally the smallest. In trumps a lower lead is often best. If these rules are followed one can draw exact inferences from leads. Thus if one's partner makes an original lead of a K from a plain suit he may be supposed to hold either A or Q and at least two more. One may have A oneself, in which case he almost certainly has the Q. Or A may have been played on the K by an opponent, in which case one's partner almost certainly commands the suit with the Q. These instructions refer to original leads: later leads are affected by the play.

Second Player.—The rule for the second player is to play his lowest card on the first round of a suit, but there are some exceptions. For instance, A would generally be played to K led, and from A, K the K would usually be played. Don't trump, if you have none of the suit, unless you are weak in trumps.

Third Player.—The third player should play his highest of the suit led (as an original lead) by his partner, to unblock his partner's long suit possibly at the same time making a high card. If he cannot beat the second player's card, he will of course play lower. Holding A, Q, play Q, but if you win lead out the A at once; this is called a finesse.

Fourth Player.—The fourth player wins the trick if he can, and as cheaply as he can.

Returning Partner's Lead.—It is the duty of a whist player to note his partner's first lead, so as to return it as soon as possible. A trump lead must be returned at the earliest opportunity, but a plain lead need not be returned at once if the player has a suit of his own to make. With only three or less originally, return the highest; with more, return the lowest; but in any case get the master card out.

Discarding.—When you have to throw away from a plain suit, choose your weakest suit, unless your opponents are playing trumps, in which case discard from your long suits.

Trumping.—Don't use trump cards in general both for leading and trumping. When strong in trumps, make it your suit; when weak, trump your opponents.

Forcing.—When you play a card with the intention of making another player trump it, you are said to force him. Don't force your partner if he is strong in trumps, or if you are weak in trumps yourself. Force adversaries who are strong in trumps, but not those who are weak. Don't force both opponents at once.

The Signal for Trumps.—A player may call to his partner for a lead of trumps by playing a higher card before a lower one to two rounds of a suit. This, of course, is of no value unless agreed on.

Dummy Whist.—This is a form of the game for three players. Four hands are dealt as at ordinary whist, but one is exposed on the table, and is played by the player who acts as partner to dummy. In double-dummy whist there are two players and two exposed hands, each player playing his own hand and another.

Progressive Whist.—This is a popular form of whist adapted to large parties. The party should consist half of ladies and half of gentlemen, but some ladies may require to count as gentlemen, or vice versa. There must be an exact number of fours, and each gentleman will have a lady as partner. The tables are numbered consecutively, and after one hand is played the winners at each move to the next in order, the losers remaining for another hand. The losing lady retains her seat and receives as partner the winning gentleman from the table behind, the losing gentleman playing with the winning lady. Each player has a scoring card, on which is noted the number of tricks won in each hand. After a certain number of rounds the scores are totalled, and there are prizes for the leading gentleman and the leading lady, with some ridiculous trophy for the "booby" or lowest scorer.

OUTDOOR GAMES AND SPORTS

Archery.—Archery has always been popular. There are now upwards of 100 clubs in the United Kingdom open to both sexes. It is a healthful and invigorating pastime, especially for ladies, since there is no great inducement to practise it to the point of absolute fatigue.

Any meadow or open space in the woodlands will serve for butts. The targets, made of straw with a canvas face, are 4 feet in diameter, and are hung upon iron tripods. The gold centre scores 9 points, the red ring 7, the blue 5, the black 3, and the white 1. The usual distance is 60 yards. The bows are made of yew or lancewood, or with a hickory back and a belly of yew, lancewood, fustic, &c. A lady's bow pulls 24 to 30 lbs.; a gentleman's up to 60, occasionally much more. A bow of 48 lbs. is sufficiently strong for all ranges up to 100 yards. The arrows are of deal. Leather protections called tips are used on the fingers of the right hand, and a bracer or arm-guard is strapped on the left arm. The targets may be placed at both ends of the ground; the archers stand before one, and after shooting the round, change ends.

The proper position to assume is to point the left toe to the mark and stand at right angles to the target; then place the arrow on the string, with the "cock" feather to the left, the shaft resting upon the left hand to the left of the bow. The thumb and fingers grip the string, the left hand being raised at the same time, and the string is released when it has been drawn to the chin. The bow should be drawn to the same extent each time, and the required difference of elevation for various ranges made by aiming at the top or bottom of the target, or at some point above or below it.

A serviceable bow may be obtained for a guinea. It should not be strung except when actually in use, and should be stored in a dry cool place. The arrows cost from 6s. the dozen.

Athletics.—Athletics includes running, jumping, weight-putting, hammer-throwing, and other sports suitable for individual competition. The governing body of athletics in England and Wales is the Amateur Athletic Association, founded at Oxford in 1880. There is also a Scottish Amateur Athletic Association and an Irish Amateur Athletic Association. Short notes on the principal athletic sports are here given.

Running.—Runners are of three classes; sprinters, who run from 100 to 300 yards at full speed; middle-distance runners, who combine fair speed with staying power over distances from a quarter of a mile to a mile; and long-distance runners, who are able to hold out over distances from a mile up to 10 miles or more. The latter two classes may meet in a half-mile race, and the former two in a quarter-mile or 600-yards race. Sprinters almost invariably start with the hands lightly resting on the starting line, and give themselves impetus by a push off the back foot.

The usual distances run are 100 yards, 220 yards, quarter-mile, half-mile, mile, 3 miles, 4 miles, 10 miles.

The genuine form of cross-country running is the paper chase, which is unfortunately giving way to inferior imitations. In paper chasing a number of runners called "hares", each laden with a bag of paper shavings, set out on an undetermined course across country, marking their route by leaving behind them a trail of shavings. Other runners, called "hounds", set off about ten minutes later in pursuit, and endeavour, by following the trail, to run down the hares. The hares may make false scents in various ways to mislead their pursuers.

Jumping.—There are three varieties of jumping recognized at athletic sports, namely, high jumping, broad jumping, and pole jumping, the last being less in favour than the other two. The high jump is made over a light lath supported loosely on short pins in two uprights. If the lath is not cleared it is knocked off the pins, and no injury to the jumper follows. A broad or long jump is made from a board, either from rest or after a sprint. In the latter case it requires both good running and good jumping power. A good take-off exactly at the board can be acquired only by long practice.

Hurdle Racing and Steeplechasing.—The usual length of a hurdle race is 120 yards, with ten flights of hurdles $3\frac{1}{2}$ feet high at intervals of 10 yards. The hurdles should be cleared by a stride and not at the jump. Hurdle races are run on grass, not on the cinder track. Steeplechasing is a similar kind of sport, with furze-topped hurdles at intervals of about 80 yards, and a water jump, the latter consisting of a ditch 6 feet wide by $2\frac{1}{2}$ feet deep, guarded by a fence. Steeplechasing is for long-distance men, the course generally being a mile or two long.

Throwing the Hammer.—For this the regulation hammer weighs 16 lbs., and is not more than 4 feet long. The thrower holds the hammer by the end of the handle, and swings it round several times so as to gain impetus for propelling it. He must throw it from a circle of 9 feet in diameter.

Putting the Weight.—An iron ball weighing 16 lbs. is used in this competition, and it must be projected from within a square of 7 feet side.

Tossing the Caber.—A caber is a bough of a tree tapering somewhat from one end to the other. It is placed upright with the small end on the ground, and is then tossed so as to make it fall on the large end and turn right over. This is a favourite contest at Highland games.

Walking Races.—Walking races are now again in vogue after a period of neglect, and some wonderful achievements both in short-distance and in long-distance walking have been recorded. The walking must be genuine (heel-and-toe, as it is called), not a kind of run.

Records.—The following are some of the record performances in the above sports:—Hundred yards race, $9\frac{3}{4}$ secs.; quarter mile, 47 secs.; half mile 1 min. $53\frac{3}{4}$ secs.; one mile, 4 mins. $16\frac{1}{4}$ secs.; two miles, 9 mins. $9\frac{3}{4}$ secs.; three miles, 14 mins. $17\frac{3}{4}$ secs.; four miles, 19 mins. $23\frac{3}{4}$ secs.; five

miles, 24 mins. $32\frac{3}{4}$ secs.; ten miles, 50 mins. $40\frac{3}{4}$ secs. One mile walk, 6 mins. $19\frac{3}{4}$ secs.; ten mile walk, 75 mins. $57\frac{3}{4}$ secs. Running long jump, 24 ft. $11\frac{1}{4}$ ins.; running high jump, 6 ft. $5\frac{1}{8}$ ins. Hundred and twenty yards hurdle race, $15\frac{3}{4}$ secs. Throwing hammer, 173 ft. 7 in. Putting weight, 49 ft. $7\frac{1}{4}$ in.

Bandy.—Bandy is hockey played on the ice by players on skates. The stick used for hitting the ball is called a bandy, and the ball (or "cat") is of solid indiarubber, between $2\frac{1}{4}$ and $2\frac{3}{4}$ inches in diameter, generally red in colour. There are eleven a side as in hockey, and the method of play is exactly the same. The bandy must not be raised above the shoulder in hitting the ball.

Baseball.—Baseball, the national game of America, is an improved and systematized form of rounders. It is played by two teams of nine players. The aim is to score runs, a run consisting of a complete round of the three bases and back to the home base. A run may be made in stages, but a player may at any time be put out by being touched with the ball before he reaches a base he is running for. When three men of the batting side are out, the innings is closed. The game consists of nine innings for each side, and the team scoring the largest number of runs wins.

Bowls is an ancient game that has been reduced to exact system in recent times. In its best and most popular form it is played on a level green of perfectly smooth, close-cropped turf. The green is bounded by a shallow ditch. Each player has two bowls of *lignum vitæ*, approximately spherical in shape, but so turned as to have a bias to one side, which causes them to swerve to that side when running on the grass, especially if they are moving slowly. The player stands with one foot on a small mat (called the "footer") near one side of the green, and projects a bowl along the grass towards a small spherical earthenware ball (called a "jack") near the opposite side of the green, his object being to place his bowl as near the jack as possible. In the normal form of the game there are four players on each side. The jack is placed by being thrown across the green, and if it stops within certain limits it constitutes a good mark. The two leaders, one for each side, send up both their bowls alternately; then the second players do the same; after them the third players; and lastly the captains (also called "skip"), who should be the best and most experienced men of their sides. When all the bowls have been delivered, the side that has the nearest bowl to the jack counts for that end, and the number of its score is the number of its bowls nearer the jack than the nearest bowl of the opposing side. A bowl in the ditch is "dead", and does not count, unless it has previously touched the jack. A ditched jack is still in play. The game may be played for so many points or for so many ends.

Boxing.—Boxing is an exercise that provides excellent training for the eye and many of the muscles, and it may prove of great service in certain emergencies. Boxing competitions take place in a roped ring,

24 feet square. Each boxer is dressed in light garments, with light boots or shoes without spikes, and wears a pair of padded gloves. Three rounds are usually fought, the first two lasting three minutes each and the third four minutes, the intervals being of one minute in length. The various methods of attack and defence used must be sought in special books on boxing.

Cricket.—However rough the cricket-ground may be, the grass should be short, and the "pitch" an absolutely level stretch of turf about 40 by 20 yards. The wickets are distant from each other 22 yards; each wicket is 8 inches wide, and consists of three upright stumps and two bails, the latter being placed across the top of the former. The bowling crease extends 3 feet each side of the wicket, and has a return crease at each end behind the wicket. The popping crease is 4 feet from the wicket, parallel to it, and is considered unlimited in length.

After the rival sides have tossed for the choice of either taking the bat or fielding, two men are sent to the wickets, bat in hand. The opposite or fielding side are all simultaneously engaged, one (the bowler) being stationed behind one wicket for the purpose of bowling his ball against the opposite wicket, where his coadjutor (the wicket-keeper) stands ready to catch the ball should it pass near him; the other fielders are placed in such parts of the field as are judged most favourable for stopping the ball after it has been struck by the batsman or missed by the wicket-keeper. It is the object of the batsman to prevent the ball delivered by the bowler from reaching his wicket, either by merely stopping it with his bat or by driving it away to a distant part of the field. Should the ball be driven any distance, the two batsmen run across and exchange wickets, and continue to do so as long as there is no risk of any of the fielders striking the stumps with the ball while they are out of their position near the wickets. Each time the batsmen run between the wickets is counted as a "run", and is marked to the credit of the striker of the ball. If the batsman allows the ball to carry away a bail or a stump, if he knocks down any part of his own wicket, if any part of his person stops a ball that would have otherwise reached his wicket, or if he strikes a ball so that it is caught by one of the fielders before it reaches the ground, he is "out"—that is, he gives up his bat to one of his own side; and so the game goes on until all the men of one team (or, rather, all but one) have played and been put out. This constitutes what is called an "innings". The teams now change positions, those who have batted going out to field, and those who have fielded going in to bat. Each side has eleven players. Generally after two "innings" each have been played by the contestants the game comes to an end, that side being the victors which has scored the greatest number of runs. The fourth innings is often not finished, because the total of the other side is passed with several wickets still to fall; this is a win by so many wickets, there being ten wickets to a complete innings. In some cases the fourth innings is not played at all, because the side that should go in has already in its previous innings exceeded the total of the other

side's two innings; this is a win by an innings and so many runs. The second side is required to take their two innings in succession if they are, on the first innings, 120 or more less than their opponents in a three-days' match, or 80 behind in a two-days' match.

In single-wicket the bowling stump is 22 yards from the wicket. When there are fewer than five players on each side, bounds extend 22 yards on each side of and in a line with the wicket, and the ball must be hit beyond the bounds to entitle the striker to a run. A run cannot be obtained unless the batsman touches the bowling stump or crease with his bat, and returns to the popping crease. When the striker hits the ball, one of his feet must be on the ground behind the popping crease or no run can be allowed. It is not usual to take byes, leg-byes, or overthrows; the fieldsman returns the ball to the bowler, and the striker may run until the ball is so returned. Three runs are counted for a lost ball.

Croquet.—This favourite lawn game has been very much altered since its first appearance among us. Mr. Lillie in his history of the game states that "as long as billiards is in favour, it is hard to see how croquet, which is outdoor billiards, can permanently go out". The original game—"crinoline croquet" it is now called—went out because skilful players found it too easy. As a garden game the old style will probably be found as amusing as the new six-hooped game.

The club ground was formerly 40 by 30 yards; it is now 35 by 28, for the Association or "All England" setting, the hoops being placed 7 yards from the side lines, the pegs the same distance from the boundaries, 7 yards intervening between the central hoops and pegs. Two methods of setting are shown in figs. 641 and 642; there are also a "Maltese Cross" and various fancy settings. On small lawns the object in setting should be to make the play difficult; otherwise a skilful player will "command" the balls and do the round in one break, thus taking most of the interest out of the game.

The hoops vary in width, 4 inches being the All England size; they may be blue or white. The pegs are $1\frac{1}{2}$ inch in diameter; the balls are $3\frac{1}{8}$ inches, and weigh 15 to $16\frac{1}{2}$ ozs.; the mallets are 3 inches in diameter by 9 inches long, with handles 32 inches long; they may be of any weight, may have the bottom round, or sliced away and the face covered with leather or india-rubber or left plain. The ball should always be struck with the face of the mallet. Mallets usually weigh from 1 to 3 pounds, the lighter being preferable for manœuvring, and those with india-rubber-covered heads for driving two balls in such a way that they keep close together for a great distance.

The game begins as soon as the first ball is struck from the starting-point, and the object of the players is to drive their ball through the hoops in the proper order, and leave the ball where it may be of use to a partner, but unlikely to be hit by an opponent. Another player's ball can be hit only after making a hoop, and cannot be struck a second time by the same player until a further point is secured. Striking another ball is called

“roquet”, and after roquet “croquet” must be taken. To do this the player's ball is placed against the one hit, and is then struck so as to move both balls. A “roll” stroke will send both in the same direction close together, a sharp blow will send the opponent's ball much farther than the player's, and by the splitting stroke the balls can be driven in different directions. Formerly the player might put his foot upon his ball and hold

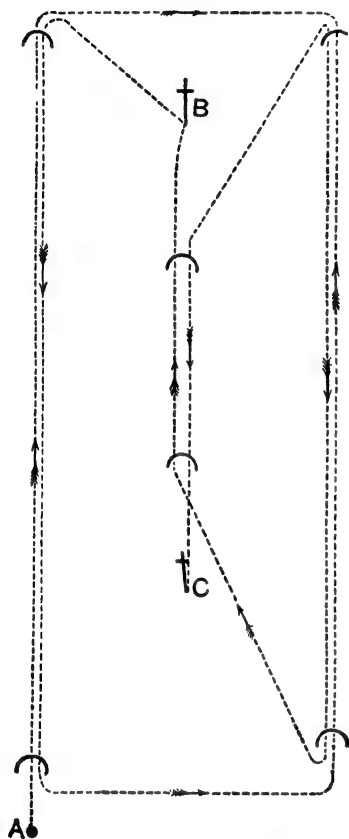


Fig. 641.—A Standard Croquet Setting with 6 Hoops.

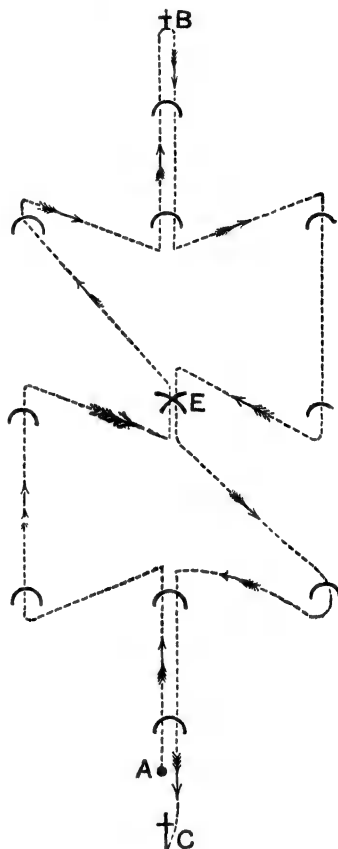


Fig. 642.—A Setting with 10 Hoops and a Cage.

A, Starting-point; B, Turning peg; C, Winning peg; E, Cage.

it fast, but now this is not allowed. This rule revolutionized croquet, making it a game of judgment rather than strength; formerly the opponent's ball might be croqueted to any distance without penalty. A turn ceases on the player failing to pass his ball through a hoop or to roquet another ball, on his failing to shake the ball off which he takes croquet, on his killing a ball, or on his making a foul stroke. A ball is killed by being driven off the lawn; it is replaced at right angles to the boundary and three feet from it. A player makes a foul stroke when he strikes another ball as well as his own; hits his own ball twice—as by “follow-

ing on"; allows any ball when in play (after a roquet a ball is in hand until croquet is taken) to touch any part of his person; lets a ball rebound from a wire, or stick, upon his person; or by striking the wire or peg moves a ball resting against it. The only penalty is that the turn ceases, the balls remaining where they are.

The croquet lawn for experienced players should be as level as a billiard table; if it is small, skilful players will prefer the variation known as "string" to croquet. In this game a yellow ball spotted in the centre of the lawn must be hit first in each turn, and may be used as the only ball in play after each point.

For garden-party croquet an absolutely level lawn is not indispensable; a good game may be played on lawns having an incline at one end, on small lawns, and on those of irregular shape. If the lawn is surrounded by flower-beds, these may be protected with wire edging, but with careful players this should not be necessary, as driving to the boundary is heavily penalized.

The All England croquet set has the balls painted blue, red, black, and yellow, and they are played in that order, the blue and black against the red and yellow. Ordinary sets are marked with one or more stripes of red or blue, and play in accordance with the numbering.

For a handicap, instead of giving a hoop it is best to give a "bisque", that is, a right to an extra turn, which may be taken at any stage of the game when the player who has this advantage is in play.

Curling.—Curling is a kind of bowls on the ice that originated in Scotland, and is still most popular there. It is played with a special kind of smooth circular stone, with two opposite flat faces, on one of which is fitted an iron handle. The rink is about 42 yards long by some 8 or 9 yards wide. There are two tees near the ends, 38 yards from each other, each being surrounded by a circle of 7-feet radius. A straight line is drawn across the rink immediately behind the tee circle; this is called the "back score". Seven yards in front of each tee a wavy line, called the "hog score", is drawn across the ice. Halfway between the two the "middle line" is drawn across the rink. A match is played by four players a side, as in bowls, and the object is to hurl the stones along the ice so that they will lie as close to the tee as possible. Every stone that does not pass the hog score, or that goes beyond the back score, is "dead", and is removed from the rink. When the "head" is completed, that is, when all the stones of both sides have been launched, only those that lie within the tee circle count, and the method of reckoning is the same as in bowls. Under certain limitations the ice may be swept clear of loose snow during the game, each player carrying a broom for this purpose. The "roaring game", as it is called, gives plenty of opportunity for skilful play, and is a most exhilarating pastime under the conditions which make it possible.

Fencing.—Fencing with foils is excellent for the development of all-round agility and quickness of eye. The requisites are good foil blades,

34 inches long, with buttons on the points, padded leather jackets, masks of twisted wirework, leather gloves and gauntlets, and thigh-pieces. The various lines of attack and defence must be learned from special treatises on the subject. Fencing is excellent for women as well as for men. The singlestick may be used with advantage in place of the metal blades.

Fishing.—Angling is probably the cheapest of British field sports. The most expensive form is salmon fishing in the preserved waters of Scotland and Wales, which may cost upwards of ten guineas a day. In Ireland the fishing is less costly—a fortnight's holiday, with many chances of fair sport, can be had at a cost of £20, including all expenses from London. Trout fishing on such rivers as the Kennet and Itchen is the most expensive variety of English fishing, the membership of the associations preserving these waters being much sought after. Bottom-fishing and spinning or trolling for coarse fish is practically free on navigable rivers such as the Thames, Severn, and Trent. The enthusiastic angler will do well to join some society—there are a thousand in the United Kingdom—preserving its own water; but the sportsman who can spare but a few days each season will find it most economical to take the ordinary daily or weekly licenses, or even fish the water farmed by keepers of anglers' hotels. Many waters are overfished, but it is doubtful if this may be said of the majority. A holiday taken in the angling season at some not easily accessible centre may be passed in fishing waters seldom disturbed by anglers, and where the visitor will obtain permission for the asking, or on payment of a trifling fee. Sea-angling is a form of sport which masters of the art of fishing with the dry fly may despise, but which the ordinary angler finds pleasurable enough. It is, of course, free, and may be practised successfully from a boat at any place on the coast, from piers, jetties, and jutting rocks, from some bridges, and in every tidal estuary.

For salmon, Scotland is, of course, pre-eminent. English anglers who do not care to go so far north may try the rivers in south-west Wales, or take a license on such streams as the Teify, Dovey, Mawddach, or Dwyrydd. In the Dovey and Mawddach good sport is also to be had with salmon trout. In North Wales, in Galloway, and in many parts of rural England a day's trout fishing can always be had for the asking, but chiefly in streams where the fish are small. Trolling and bottom-fishing in corporation and canal reservoirs, in some parts of rivers like the Trent and Severn, the Avon and its tributaries, and in most lakes and large pools, are free to the public on taking out a daily ticket costing a trifling sum.

The close time for fishing varies: in England and Wales the close time for salmon is from 1st November to 2nd February, in Scotland from 1st November to 10th February, in Ireland, for both salmon and trout, from 1st November to 1st February. For trout, in England and Wales the close time is from 2nd October to 1st February, and there is no close time in Scotland. On many streams there are special regulations, mostly increasing the close time. Sunday fishing is illegal, and in Ireland, Saturday is also

a close time for salmon and trout. For fresh-water fish (other than trout, pollan, and char) the close season is from 15th March to 15th June, but certain districts are exempt, and in others, as Norfolk and Suffolk, the close season is from 1st March to 30th June.

No license is needed in Scotland for salmon or trout, but in England and Wales licenses are compulsory for both, and in Ireland for salmon. In Ireland the license for a rod costs £1. In England and Wales it is usually £1 the season, with a lower price for a short period; in Cumberland, 15s.; in the Cleddy, Taff, Ely, and Rumney, 10s. 6d.; in the Coquet, Wear, and Ouse, 5s. The salmon license includes the right to fish for trout. A trout license costs from 1s. each rod in the Conway, Severn, and some other rivers, to 10s. in the Avon, Erme, and Dart. Usually it is 2s. 6d., and in most districts 1s. for a short period.

Most anglers burden themselves with useless impedimenta. The necessities are a rod, with an extra top joint, a couple of lines, and a dozen spare hooks, flies, casts; a winch, a landing-net, and a bag or creel. A serviceable trout rod can be had for 10s. 6d.; one as good as any fisherman wants for 21s. A salmon rod costs £3, 3s. Split-cane built-up rods are luxuries; a good one about eleven feet long, with two tops, can be had for 42s.; a split-cane eighteen-foot salmon rod, with best fittings, may cost £10. For trolling and bottom fishing, and for sea fishing, wood or whole-cane rods, costing at most 20s., will fulfil every requirement. Winches cost 10s. 6d.; Nottingham reels, from 2s. 6d.; trolling and spinning lines, 10s. the 100 yards; braided waterproofed trout lines average the same price: salmon lines from 15s. to 21s. Trout casts, nine feet long, cost 5s. the dozen; salmon casts, 2s. each; hooks, 1s. 6d. the 100; salmon flies, 6d. to 2s. 6d. each; trout flies, 2s. the dozen; artificial minnows, 1s. 6d. each. Artificial baits of all kinds are now so cheap and good that there is absolutely no excuse for fishing with live bait. Fishing-bags cost about 7s. 6d. each; creels, 3s.

Fives.—This is chiefly played at the great English public schools. There are two chief forms of the game, the Eton and the Rugby game. The Eton fives court is uncovered and has no back wall, whilst the Rugby court is usually covered and is walled on all four sides. The floor of the Eton court is divided into an inner and an outer court by a shallow step across its breadth, and a buttress, called the “pepper-box”, projects a little from the left-hand wall, a short distance behind the step, enclosing a space called the “hole”. The Rugby court has no step, pepper-box, or hole. The front wall in the Eton game has a horizontal line marked across it at a height of 54 inches, and there is a vertical line on it at a distance of 44 inches from the right-hand wall; in the Rugby game the height of the line is 34 inches. The principles of play are much the same in both cases, and therefore we shall, in what follows, speak of the Eton game only.

The game is played by four players, two against two. Call the players of the in side A and B, A being server, and those of the out side C and D. A stands on the inner court, near the pepper-box, B on the outer court, near

the right-hand outer corner. C stands near the middle of the outer court, and D near the left-hand outer corner. A must serve the ball from his hand so as to hit the front wall above the line, and then the right-hand wall; and C returns it so as to hit the right-hand wall and then the front wall above the line, or only the front wall above the line to the right of the vertical line. The ball must then be played by a player of each side alternately, the object being to hit the ball before it strikes the ground twice, and to make it hit the front wall above the line. When A is out, his partner serves; when both are out, the other side goes in. Only the in side can score points, and the game proceeds until one side scores 15 points. The ball must not, when in play, touch any part of the players' persons, except the hand and the wrist.

Football.—There are two forms of football, the Rugby and the Association game, the latter being much the more popular with the general public.

In Association football the ball is spherical, and the teams consist of eleven players a side, constituted thus: Goalkeeper, two backs, three half-backs, and five forwards. The object of the game is to score goals by putting the ball through between the opponents' goal-posts under the bar. The game lasts about an hour and a half, divided into two equal portions, the teams changing ends at half-time. No player may handle the ball in play, except the goalkeeper under certain restrictions. The forwards, comprising the centre forward and two players on each wing, are the attacking parties; the backs and the goalkeeper are the defence; whilst the half-backs are of an intermediate kind, and are the pivot of the side, especially the centre half.

In Rugby football the ball is oval in shape, and there are fifteen players a side, distributed thus: One full back, four three-quarter backs, two half-backs, and eight forwards. The object of play is to put the ball over the bar between the opponents' goal-posts, thus scoring a goal. A player may carry the ball and run with it, and may score a goal from a drop kick. If a player manages to run behind the opposite goal with the ball in his hands and touch it down on the ground, he scores a try. The ball is then taken out in front of the goal to a suitable distance, directly in front of the point touched, and one of the side that made the try has a place kick at goal. A try counts 3 points, raised to 5 if it is converted into a goal; a dropped goal scores 4, and a penalty goal 3 points. The scrummage, or scrum, is a great feature of Rugby play. In the scrummage the forwards form a closely pressed mass, with heads down, and the ball is thrown in to their midst.

Golf.—Golf, in origin a Scottish game, is now played throughout the United Kingdom, and to a less extent in other countries. The ideal golf course is a seaside links, but many fine courses have been laid out in inland country. The game consists in putting a small hard ball into a series of small holes in succession by striking it with specially adapted clubs. The first stroke towards each hole is made from a teeing ground, where the ball

longest iron-headed club, used for fairly long strokes, and available for "lies" that do not suit the brassy; (4) the *iron*, a shorter club than the cleek, with more slope on the face, used more for pitching shots; (5) the *mashie*, with a more sloping face than the iron, used for the final approach to the putting green; (6) the *niblick*, used for getting out of sand bunkers; and (7) the *putter*, of various shape and material, used for the finishing strokes on the smooth green. The normal golf course consists of eighteen holes, and the total distance covered in a complete round is from $2\frac{1}{2}$ to 4 miles; but nine-hole courses are also common. The number of golf clubs throughout the country is now enormous, and no one need have any difficulty in finding opportunities for playing this excellent game.

Hockey.—Hockey is a game very similar in many respects to Association football that has become very popular in recent years. It is a favourite with women as well as with men. The teams consist of eleven a side, arranged as for Association football, but the ball (a cricket ball painted white) is propelled by striking with a special form of wooden club, curved at the end. A goal is scored only when the ball is sent between the opponents' goal-posts from within a kind of semicircle called the "striking circle". The players wear leg guards and gloves to protect them against bruises. The club must not be raised above the shoulder in striking the ball. Hockey is also played on the ice.

Lacrosse.—Lacrosse is played on a larger ground than either hockey or football, but the arrangement is similar. The goals must be not less than 100 or more than 150 yards apart; the posts must be 6 feet apart and 6 feet high, with a net into which the ball is thrown from the "crosse", a kind of racket, after which the game is called. Twelve players constitute a team. The game resembles football. Its charm lies in the dexterity which can be attained in throwing and catching the ball from all positions. Lacrosse is a modification of the old ball play of the North American Indians, and is now the national game of Canada.

Lawn Tennis.—Lawn tennis requires a level lawn or made court, of the dimensions given in the plans, besides a margin of at least 6 feet beyond the lines. The net, which stretches right across the middle of the court, should be 3 feet high at the centre. Efficient markers at from 10s. each are sold for marking the court-lines, which should not be less than $1\frac{1}{2}$ inch broad. The game is usually played by four persons, two on each side. The server, while standing on or beyond the base-line on the right, strikes the ball diagonally over the net into the right-hand service court. The striker-out must take the ball if it falls within the court or upon the lines marking it, and return it to the opposite side of the net; the server or his partner then hits the ball back again; and so on alternately until one side or the other fails to return the ball or drives it beyond the courts, when the first point is lost to that side. A served ball must be taken on the first rebound; a returned ball may be volleyed back (*i.e.* struck before touching the ground) after it has passed the net, or on the first rebound after falling in any of the courts. After the first point the

server crosses to the left of the base-line and serves into the left service court over the net, continuing afterwards to serve alternately from the right and left courts. When there are four players only the partners on the side which is serving thus change courts. It is a "fault" if the service is delivered from the wrong court, or into the wrong court, or out of court; it is not a "fault" if the server's foot, which is beyond the base-line, does not touch the ground at the moment at which the service is delivered. It is a "let" if the ball touches the net, but is otherwise a good service. A "let" does not affect the score. If, however, the ball touches and passes over the net in any other but a service stroke, it must be accepted. After a "fault" or "let" the server plays again; after two "faults" his opponent

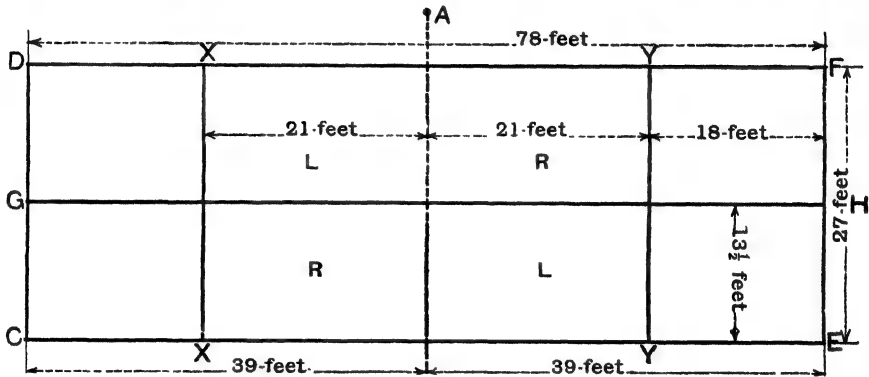


Fig. 644.—Plan of Single-handed Tennis Court.

AA, Net. CD, EF, Base lines. XX, YY, Service lines. RR, Right courts. LL, Left courts.

scores the point. In single-handed games the server in one game becomes the striker-out in the next, and so alternately until the set is concluded. In the four-handed game the pair having the right to serve decide which partner shall do so, and the opposing pair decide similarly as to the second game. The other two players serve in the third and fourth games, and this order is maintained throughout. No player may receive or return a service delivered to a partner, and the order of service and of striking-out must not be altered. During a set the strikers-out may not change courts to receive service, nor may the sides change ends.

The ball can never be taken on the second rebound, nor may it touch any of the players, nor be struck twice with the racket nor by both partners in making one return.

The first point won by a side scores 15; the next makes the score 30; the third 40; the fourth 50, or game. If both sides are at 40 the score is called "deuce"; the next stroke won by either side is called "advantage" for that side; if the side which has scored "advantage" wins the next stroke, it wins the game; if the other side, then the score is "deuce" again; and so on, until a side which is at "advantage" wins the following stroke. Or it may be agreed that whichever side wins the stroke after the first

"advantage" has been scored wins the game. The side which first wins six games, wins the set, except if both have won five, when the score is called "games all", and the next game is an "advantage" game; if the side winning it wins also the following game, the set is ended in its favour; if it loses, the score goes back to "deuce" or "games all". More generally, however, the strictly correct rules are departed from, and it is agreed that the side which first wins six games wins the set.

Requisites.—The best rackets cost a guinea each, but very serviceable ones with cane handles and cane edge may be bought at half that price. The weight of a lady's racket is from 11 to 15 ounces; a gentleman's

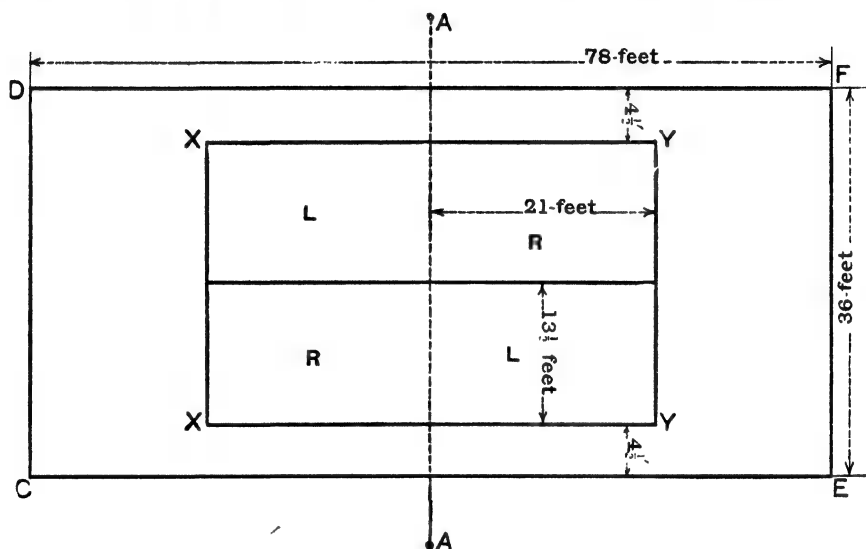


Fig. 645.—Plan of Full-size Tennis Court.

AA, Net. CD, EF, Base lines. XX, YY, Service lines. XY, XY, Service side lines.
RR, Right courts. LL, Left courts.

racket is more often over 16 ounces than under. Light rackets should be bound with gut at the shoulder. Posts, with special base-fittings and ratchets, or similar gear, to tighten the net, are now generally used; they cost from 15s. to 42s. The 42-feet net, for the double court, costs 12s. 6d. in the best quality, which is steam-tarred and has a canvas top-band and copper-wire rope. The ordinary cotton nets cost from 5s. each. The balls, which should be not less than $2\frac{1}{2}$ inches in diameter, and weigh from $1\frac{1}{2}$ to 2 ounces each, are of india-rubber, cloth-covered, and cost, in best quality, about 1s. each. Match balls cost 15s. the dozen; practice balls, regulation pattern, from 6s. to 8s. 6d. the dozen.

Rackets are best kept in special presses made for one to four rackets; they must not be put away wet, and should be kept in a dry cool place. Balls should be kept in a net, and cleaned with pipe-clay.

Lawn tennis not only wears the lawn severely, but is disastrous to flower-beds and ornamental shrubs unless the ground is fenced in with

wire netting, which is unsightly. Some protection is afforded by using removable tanned stop-netting. Experience has proved that this is most efficacious when not stretched too tight; the net when hung so that the bottom edge lies on the ground, will prevent more balls from escaping than if hung a foot higher, but barely reaching the ground.

Quoits.—Quoits is the best outdoor game where little space is available. It requires a special ground at least 20 yards in length. Pins are driven into the ground, one at each end, and are surrounded by soft clay, so that the quoit may stick into the surface wherever it falls. The quoits are steel rings, not exceeding 8 inches in outside diameter, which weigh from 3 to 8 lbs. the pair. The regulation quoit, weighing $7\frac{1}{2}$ lbs. the pair, costs about 8s. 6d., or a guinea the set of four, with two pins. The pins project about one inch only above the surface of the clay, and are split to hold a slip of paper which serves as a mark. The distance from pin to pin should be 19 yards. The player stands level with one pin and pitches his quoit with his first step, his object being to ring the other pin, or at least fix his quoit in the clay as near as possible to it. The winner at each end takes the next first throw. A ringer counts two points. No quoit counts that is not delivered into the clay, or that has rolled, or that is on its back (unless it is knocked over by another, or is holding fast into the clay). If opponents throw ringers in the same round no points are scored; if neither throws a ringer, the quoit that is nearest the pin counts one point, and the next quoit, if belonging to the same player, counts a second point. If there are teams of players, one side counts a point for each quoit nearer to the pin than any of their opponents' quoits. All dead quoits should be removed before the next player throws.

Quoits for use on board ship, and in yards and rooms, are made of rope, and may be loaded up to the usual weight. They are pitched into a small bucket; or the proper game can be played in any yard or on any lawn, with a stand and pin or pins.

Rackets.—Rackets is a variety of fives played with a bat instead of with the open hand. It is not properly an outdoor game, because it is played in a covered rectangular court. The standard length of the court is 64 feet, and the standard breadth 31 feet. A line is drawn on the floor across the court at a distance of 23 feet from the back wall, and the back part of the court is divided into two equal portions by a line parallel to the length of the court. At the corners of the front part of the court farthest from the front wall, service boxes, 8 feet square, are marked off by lines on the floor. The ball is made of compressed cloth covered with skin, and the bat, or racket, is similar to a lawn-tennis racket. The method of play is very similar to that described under fives.

Ring-Goal.—Ring-goal is a game for two players; it can be played on any tennis lawn. The goals should be 78 feet apart, 10 feet wide, and 8 feet high. They are usually backed with netting. A crease-line is drawn parallel with the goal, 6 feet before it. The players stand in front of the goals; each has two sticks, 36 inches long, and with these they throw the

ring, which is made of split cane covered with leather, and weighs about $\frac{1}{4}$ lb. A throw is made in the following manner. The stick in the left hand is held rigid at about right angles to the body, with the ring on it, to which in throwing it gives the required direction. The stick in the right hand is put through the ring, and moved outwards from the body, giving the ring its impetus. The ring must be caught by the defender on one or both his sticks, and be returned by him as speedily as possible. Each time the ring is thrown through the goal-posts into the net one point is scored to the thrower; if it is thrown wide, or touches the ground before it reaches the opposite crease, the defender counts. A game is eleven points. The server must have one foot on the crease-line when serving. The requisites for ring-goal cost from 21s. the set.

Rounders.—Rounders is a universal pastime. Any number can play, and there are two sides. Four or more bases are marked at equal distances from each other on an imaginary circle. The side "in" stand behind the home base; the other side have a pitcher in the centre of the circle, a stopper behind the home base, and fielders outside or within the circle. The pitcher throws a soft ball—lawn-tennis balls are best—at the player whose turn it is to defend the home base. The player strikes it with a bat, or oftener with the open hand, and at once runs to the first base, while any other previous striker who may be stationed at that base advances to the second. A player may run on from point to point if possible, so long as he does not pass any of his own side; but as soon as the ball is dead, *i.e.* reaches the pitcher's hands, he must remain at the nearest base until the next striker runs. Usually the batsman is allowed two misses, but at the third throw must run whether he hit the ball or not. The striker may be caught out by any of the opposite side, and he or any of the others on his side may be run out if hit with the ball while running between the bases. When the players are few, a "rounder"—that is, a run completely round the circle, starting from the home base—gets a player who is "out" reinstated; in other games the rounder simply adds one to the score. As the game is played sometimes, a "catch" from the bat puts out the whole side. The team which scores the larger number of rounders in an innings wins the game. Rounders may be played on the ice by skaters.

Rowing.—The modern racing boat propelled by oars is long, narrow, and light, and is of the outrigger type, that is to say, the rowlocks are carried on iron supports projecting beyond the sides. The seats slide backwards and forwards with the movement of the oarsman. A boat may be built for two, four, or eight oarsmen, the last-named having also a coxswain or cox at the stern to steer the boat and control the crew. The oarsman nearest the stern sets the time for the others, and is called the "stroke"; he must be a very skilful man, of excellent judgment and nerve. Correct rowing is an art that can be acquired only by much practice under skilled guidance. The body must move freely and easily, without jerk, the wrist action must be absolutely correct, and the oar must enter, pass through, and leave the water

properly. The return of the oar at the "feather", that is, out of the water with the blade horizontal, is an important element in the whole movement that needs much practice before it can be done thoroughly. Sculling, that is, rowing with two oars in the hands of one person, is an excellent exercise that demands slightly different qualities. The paddling of canoes may also be mentioned in this connection.

Shinty.—Shinty is simply a variety of hockey that has been organized as a distinct game.

Skating.—Skating is a pastime that, like curling, can be enjoyed only at long intervals, unless one has access to one of the few real-ice rinks, where it can be carried on at any time of the year and under all weather conditions. The old kind of skate that is screwed into the boot and secured by leather straps has distinct advantages, but it has been largely displaced by those that are secured by metal clasps and springs. When skating over water of any depth, one must see that the ice is strong enough to bear one and in good condition; otherwise serious results may follow. If one's object is simply to obtain some pleasant exercise, one need only master skating on the inside edge of the skate. In doing this one moves forward by a succession of short curves made with each foot alternately, the curves starting with an outward stroke of the foot and turning in. In order to do figure-skating it is necessary to master the use of the outside edge, that is, to skate on the outer instead of the inner edge of each skate. When this has been thoroughly mastered it will not be difficult to describe eights, threes, roses, loops, and other figures on the ice. Several games can be played by skaters on ice, such as hockey and rounders, and some kinds of dances can be gone through.

Roller skating has become very popular in recent years, and rinks have been erected in great numbers throughout the country. The skates each run on four small wheels, and can be made to do nearly all that can be done on the ice with the proper skates.

Ski.—The use of ski is general in Norway and Sweden for the purposes of ordinary life and also for sport, and in recent years they have been to some extent introduced into Britain for sporting purposes. Ski are long, narrow, wooden strips, attached to the boots by straps, which enable one to progress easily and quickly across snow surfaces. They are usually turned up at the pointed tips. A jump of 120 feet on ski is on record.

Swimming.—There are few finer and more commendable exercises than swimming, because it not only exercises most of the body muscles but also enables one in an emergency to save one's own life or the lives of others. The ability to float on the back is a most essential accomplishment of the swimmer, and is very easily acquired, especially in salt water; it is only necessary to turn on the back, expand the chest well, and throw the head well back. Floating may be of the greatest service in circumstances of difficulty or danger, notably when the swimmer is seized with cramp. The ordinary breast-swimming stroke is easy to learn, but it is well to master some of the other methods also, in order to suit special

circumstances or to rest some of the muscles. Those other methods include the hand-over-hand stroke, back swimming, the side stroke, the over-arm stroke, and the trudgen stroke. No swimmer is fully equipped who has not learned to dive, and it is most desirable that all swimmers should master the methods of life-saving.

Water polo is a form of football adapted for play by swimmers in the water. It is played by teams of seven a side, namely, a goal-keeper, two backs, one half-back, and three forwards. A game lasts fourteen minutes, with an interval at half-time.

Tennis.—Tennis is a court game similar to rackets, but much more complicated. A tennis court is such a special kind of structure that few people ever have an opportunity even of seeing one, still less of playing the game. A detailed description, such as has already been given of lawn tennis, is therefore unnecessary here.

Tobogganing.—This is a form of sport long practised in Canada and Russia, but now most completely developed in Switzerland. It consists in descending a snow or ice slope on a kind of sled called a toboggan. The Canadian toboggan is of wood, turned up in front, and is usually without runners; and the chute or course is straight, and of comparatively uniform slope. The toboggan used at St. Moritz and elsewhere in Switzerland is constructed entirely of steel, and provided with long springy runners. The tobogganer lies on it at full length, face downwards, and controls its movement down the curved and crooked course by motions of his head and body, or by pressing on the ice with the iron-shod toes of his boots. The Cresta run at St. Moritz is over three-quarters of a mile long, with a drop of 500 feet, and it has been covered in 63½ seconds. Road tobogganing is also practised.

Wrestling.—In wrestling, two persons clasp their hands round each other's body, with the left arm over the opponent's right, and the chin over the opponent's right shoulder, and each then tries to make the other go to the ground, that is, to throw the other. Kicking is not permitted. If either wrestler is compelled to break his hold, he loses; and in the event of both falling together, the one who is under is the loser. Several varieties of wrestling are recognized, the above description referring to the Cumberland and Westmorland style. There is also the so-called Greco-Roman style, the Lancashire or Catch-as-catch-can, the Cornwall and Devon, &c.

HOLIDAYS.

INTRODUCTORY.

Inhabitants of the British Isles have long ceased to be content to live and die in the place which gave them birth. The facilities offered by steamboat and railway travelling have caused the annual summer holiday to be regarded not merely as a luxury but as a necessity, the only question requiring consideration being "Where shall I go?" Of course the great point to be achieved is a complete change of surroundings, and, as far as possible, equally complete immunity from the hundred-and-one worries of the ordinary daily life. But the same kind of change does not suit everybody; some, for example, derive most benefit, mental and bodily, from an absolutely idle holiday, a lotus-eater's life with neither active amusement nor occupation, while to others such a way of spending the time would mean boredom and, probably, indigestion. This latter class, which is a large one, gains most good from change of interests and pursuits rather than from complete rest. In any case, however, the method of spending the holiday should be a rational one. A man leading a sedentary life for eleven months of the year should not join a party of cycling tourists determined on doing their seventy miles a day, nor should a woman whose average daily walk is half a mile choose a pedestrian tour or an Alpine expedition as her holiday relaxation. The week-end outing has become enormously popular in recent years, and the railway and steamboat companies cater specially for the week-end traveller. A holiday on the Continent can now be had even by those who cannot afford much time or expense.

COUNTRY AND SEASIDE HOLIDAYS.

Lodgings.—The majority of middle-class people spend their summer holiday in furnished apartments or boarding-houses at the seaside or in the country. Good lodgings in genuinely rural spots are not altogether easy to obtain. The lists issued by the various railway companies, although useful as far as they go, are nothing more than directories, the companies disclaiming any responsibility for the names given. In some of the better-class farmhouses it is possible to find comfortable accommodation, but very careful enquiry should always be made as to the cooking, drainage, and

other domestic matters. The lavender-scented sheets, the new-laid eggs and the rosebuds peeping in at the window, which appear so attractive—on paper—to the townsman, are very poor equivalents for the lack of all the common comforts of ordinary civilization. Sometimes good rooms may be obtained in the more modern houses to be found on the outskirts of pleasant country towns, and the “paying guest” system exists more frequently and works with better results in the provinces than in town.

The choice of a seaside resort should be influenced in no small measure by the amount of money available for the expenses of the trip. It is a great mistake, if economy has to be considered, to select a fashionable place where the season is brief and prices are proportionately high, and to be obliged to crowd into small stuffy rooms in a dreary back street, when comfortable and ample accommodation, equally good air, and probably as much enjoyment, could be obtained at a smaller cost in a less ambitious place not twenty miles away. If there are children in the party, rooms should certainly be engaged before arrival, although an unencumbered couple can, of course, go to an hotel for a night and look round for lodgings at their leisure. If possible, unless very well recommended by friends, the lodgings should be seen before they are definitely decided upon; at any rate it is wise to engage them only for a week, hinting that if things are found satisfactory the stay will be prolonged. But this is not always feasible in very popular places where the demand for accommodation exceeds the supply.

When lodging-hunting in person it should be borne in mind that a house that smells close and stuffy should be avoided, as should one where the door-bell is not answered promptly, or where the maid is grimy and slipshod. The condition of the sanitary arrangements should not be overlooked, and it is well to observe whether the bedding is reasonably clean, while if there are children in the family, the landlady should always be asked if there has been any recent case of infectious illness in the house.

If possible, rooms should be secured which have an eastern or southern aspect. With an eastern aspect the full benefit of the morning sun will be obtainable, and this is an important point.

Prices of accommodation vary in different classes of seaside resorts. Perhaps, broadly, the charges at a fairly popular place average about a guinea a room in the season. That is to say, a medium-sized sitting-room and one double bedroom in a house on or close to the sea-front will cost £2, 2s. a week. Attendance is supposed to be included in the rent, but unless the tenant insists on inclusive terms, the weekly account often contains such “extras” as 2s. 6d. or 3s. 6d. for kitchen-fire, 6d. for hall-gas, 1d. or 2d. a pair for boot-cleaning, 3d. each person for “cruets”, and other sums for washing bed and table linen. It is much better to pay at a rather higher rate than to have these unexpected additions to the bill.

Boarding-houses. — Overworked and worried people will find the regularity of boarding-house life and the freedom from the cares of house-keeping highly conducive to the return of mental and bodily health, provided, of course, that they choose their boarding-house with some discrimi-

nation. One of the advantages a boarding-house has over ordinary apartments is that the visitor knows precisely what his weekly bill will be, whereas, in apartments where the lodgers cater for themselves, the cost of living depends largely not only on the honesty of the landlady, but on her capabilities of making the best and most of the food which her lodgers buy. The terms charged at a seaside boarding-house vary from 30s. to £3, 3s. a week per head, according to the town, situation of house, and style of accommodation provided. There are, as a rule, no extras, except perhaps a charge for the use of the bathroom, but even this is not very common.

Furnished Houses.—In certain circumstances it is cheaper to hire a furnished house than lodgings. Residents by the sea are sometimes glad to let their houses in the summer, and from careful tenants with unimpeachable references will frequently accept a low rent. Then again, if the family desiring a visit to the sea is large, it is often possible to find a schoolhouse to let for the vacation at a nominal rental. The sanitation and general equipment of such residences is usually superior to those of ordinary lodging-houses. In such cases the tenants must provide their own attendance, a course not always convenient, but sometimes the servants belonging to the house can be temporarily engaged. The use of plate and linen is not generally included in the rental. When taking or letting a furnished house, an inventory should be made out and a formal agreement drawn up, even though the tenancy may be but for one month.

If it is not considered necessary to seek diversion in new quarters every holiday, it is a good plan to rent a small cottage in some pleasant village, inland or on the coast, and to furnish it plainly but comfortably. If the locality is well chosen, such a cottage may often be let during part, at any rate, of the time when it is not wanted by the tenant himself. If it cannot be let, a respectable couple can easily be found who will look after it and keep it clean and aired in return for the use of a couple of rooms rent free, and perhaps the produce of the garden. The cost of renting and keeping up a cottage will not amount to much more than that of a month or six weeks' stay at a fashionable watering-place.

Sea Bathing.—Chief among the attractions of a seaside holiday is that of bathing. On no account, however, should this be indulged in without due regard to health. Persons with weak hearts should avoid bathing more than twice during the week, and should not bathe at all unless weather and water are warm. A sudden chill or an unexpected shock resulting from immersion is not infrequently fatal. Many robust persons are liable to headaches after bathing; a pinch of salt placed on the tongue and allowed to dissolve gradually is a good remedy. A feeling of enervation habitually experienced after bathing must be taken as a warning that the practice is harmful, and it should then be discontinued.

The best time at which to bathe is the early morning, but it is unwise to enter the water if the stomach is empty. A common opinion is, that a "pick-me-up" is beneficial just previous to a bath, but this is a mistake; all stimulants should be avoided. Some persons suffer from

numbness in the hands and feet on entering the water. This is usually due to defective circulation, or to bathing too soon after meals. Brisk rubbing of the affected parts is a simple and effectual remedy. Bathing after a heavy meal is most dangerous; an interval of two hours at the least should be allowed. From five to fifteen minutes is really a sufficiently long period for anyone in ordinary health to remain in the water. It is never safe to go far out from the shore when the tide is on the ebb; even the most powerful swimmers have found it impossible to make progress against a strong tide. Diving from or swimming near piers should be avoided, as there is invariably a strong eddy round them. When a bather is seized with cramp, he should at once call for assistance, even though it be but a slight attack. A brisk towelling upon emerging from the water is most beneficial and invigorating.

Water-polo and similar aquatic games are very enjoyable, but they involve too great exertion and far too protracted immersion for those whose desire in bathing is to secure a share of the delights and health-giving results of an open-sea dip.

Trunks.—Travelling trunks should be as good of their kind as can possibly be afforded. If really first-rate leather portmanteaus cannot be indulged in, it is advisable to avoid imitations, and to be content with the cheaper trunks covered with black-varnished canvas, or even with those of painted iron, which, if not ornamental, are at any rate strong and serviceable. The flat regulation cabin-trunks are better than the dome-topped dress baskets where space of stowage has to be considered, as they can be placed one on top of another, pushed under bedsteads—a bad plan, but sometimes inevitable in lodgings—or turned into comfortable seats with the aid of a folded rug as mattress, a cretonne cover, and a couple of the very inexpensive vegetable-down cushions, which can be squeezed into a corner of the trunk for the journey. A useful basket-trunk woven of Japanese grass, called a Japanese basket, is in considerable favour among holiday travellers. It can be bought at any bag and portmanteau establishment, and costs, including its leather straps, from 2s. upwards, according to size. There are no hinges to this useful contrivance, which is in two parts, one fitting over the other.

A serviceable box can be easily made by any carpenter or joiner, if a tour with frequent changes of residence is decided on as a holiday. It is in form like an ordinary box, with the lid fixed, and one side hinged at the bottom so as to permit of its being dropped down. Inside are two, three, and four shelves of drawers. Anything that is wanted can thus be obtained from the box without turning over the whole of its contents. It is, in fact, a miniature chest-of-drawers with a lock-up hinged door.

For ladies who desire to take with them several hats or bonnets, nothing can be more convenient than the box shown in the illustration (Fig. 646). By its means six hats can be packed in a small compass, an important consideration, and if they are properly fixed there should not be the slightest risk of injury to their trimming. One hat may be

pinned inside the lid, another to the bottom of the box, and one to each side, pads being provided for the purpose. The case is made of strong material bound with leather, and the lid is secured both by a lock and by straps. This box is very cheap, and is particularly convenient for ladies who like frequent changes in headgear.

A soiled-linen bag of waterproof canvas, with lock and key, is a valuable adjunct to travel-equipment, and is, indeed, an essential one when the holiday is to be spent in a cruise, whether in a private yacht or a tourist steamer. For week-end purposes one of the smaller sizes of kit bag is very convenient.

Packing.—The perfect packer is born, not made, yet much may be learnt by experience. Heavy things such as boots, each pair in a neat holland bag, and books, should be placed at the bottom of the trunk, and wedged quite tight with such soft things as stockings and vests. When this layer has been made fairly solid and quite flat, the linen may be placed on top, and then the dress-skirts and the coats carefully folded with sheets of tissue paper

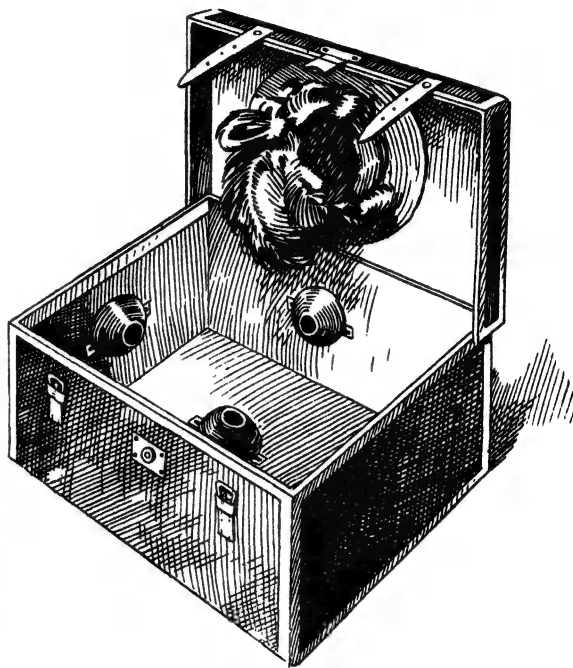


Fig. 646.—Bonnet-box.

between the folds, then bodices and blouses. Finally, a neat sheet of holland or art-linen is placed over the contents of the box, and tucked well down all round. Bottles, hand-mirrors, and other breakable things will travel quite safely if packed among the soft things, but as an extra precaution they may have cases of wadded pongee or sateen made for them. Parasols may be put in the trunk, not too near the top, if it is long enough to take them. If they are to travel separately, they should be provided with a holland or coloured-linen case.

The outfit of wearing apparel should be as small as possible, for a large amount of luggage is a nuisance, especially when it is divided into many little lots, handboxes, bags, and paper parcels, without which some ladies seem to be unable to travel. Still, the changeable ways of our climate have to be considered, and sufficient warm wraps must be taken for all emergencies. Above all, the clothes selected should be suitable.

If the holiday is to be spent in ordinary lodgings, the luggage may include with advantage a small stock of linen pillow-slips, fine sheets, tablecloths, table-napkins, and bath-towels of respectable size and texture.

It is advisable to take a small medicine case, especially if there are children in the party. Any lock-up box will do. A supply of lint should be part of the contents, with cold cream, vaseline, a little oil of cloves for toothache, almond oil for earache, and other simple remedies.

All trunks should be carefully locked, strapped, and labelled, the nicest kind of labels being leather tallies, with the owner's initials stamped on the back. A small bag containing necessities for the journey, and for the first night, if the destination will not be reached until a late hour, may be taken into the railway carriage, but the habit some people have of filling up the compartment with huge boxes and baskets, hold-alls, and bundles of wraps as big as feather-beds, cannot be too strongly condemned.

If there is any considerable quantity of luggage, it may be sent on a day previously, most railway companies having special and moderate terms for "passengers' luggage sent in advance". Very large quantities, however, should be sent by quick goods train. Most railway companies will convey luggage from house to station and vice versa at a charge of about 6d. per package.

The family motor bus is likely to supersede the railway journey to a large extent. It is large enough to take eight persons with all their luggage, including bath and perambulator, and saves all the trouble of catching trains, tipping porters, finding seats, &c. &c.

Where to Go.—It is not always easy to make up one's mind where to go for a holiday, less from lack of choice than from too great variety of choice. Where there are young children, a seaside place with a good sandy beach is very desirable, but many now prefer high inland districts with their invigorating air. Facilities for golf, fishing, and boating will affect the choice of many. The rainfall is greatest in the western parts of the United Kingdom, greatest of all in the English Lake District, which is otherwise so attractive. Fashionable places like Brighton, Eastbourne, and Oban are more expensive to live in than places like Blackpool and Margate, frequented more by the common people. Some seaside resorts, such as Scarborough and Rothesay, cater successfully for a variety of styles and tastes. An increasing number of people go to out-of-the-way little places, or quaint villages like Staithes on the Yorkshire coast, rather than to the crowded seaside resorts with their promenades, piers, pierrots, entertainments, and constant stir. Whitby is an example of a town that attracts many by its quaint old-world character and the venerable historical associations clustering round its noble ruined abbey.

The number of Scottish, English, Welsh, and Irish coast towns and villages in favour as holiday resorts is so large as to make enumeration impossible here. Those on the south coast of England, especially in Cornwall, and on the south coast of Ireland, have a very mild climate that makes them excellent winter resorts. The same is true of the

Channel Islands. Of high inland districts the Peak country around Buxton, the Haslemere district of Surrey, Braemar and upper Deeside, the upper Spey valley, and southern Lanarkshire are notable examples. Leading inland watering-places are Harrogate, Ripon, Ilkley, Matlock, Leamington, Cheltenham, Bath, Tunbridge Wells, Malvern, Llandrindod Wells, Moffat, Strathpeffer, and Bridge of Allan. An excellent holiday for a family may be spent at a farmhouse.

HOLIDAY TOURS.

General.—The touring holiday has many points of superiority over the fixed holiday, but the latter is, of course, a necessity where there are young children to be attended to. When touring, one not only renews one's health and vigour by living amid pure and bracing air, but one also braces the mind and spirit by contact with a great variety of lovely and grand scenery, and with notable historical and other associations. The chief railway and steamship companies now offer a large number of tours within and around the British Islands at very moderate fares, and it is now possible to do a fairly extensive holiday on the continent of Europe at comparatively small expense. Various tourist agencies cater for the tourist, especially on the Continent, the best-known being Thomas Cook & Son, Ludgate Circus, London; the Polytechnic Touring Association, 309 Regent Street, London, W.; Dean & Dawson, 82 Strand, London, W.C.; and Dr. H. S. Lunn, 5 Endsleigh Gardens, Euston Road, London. The first two of these have numerous provincial branches.

British and Irish Tours.—It is now possible for people of moderate means to visit every corner of the United Kingdom in comfort during short annual holidays. The Highlands of Scotland, the Land of Burns, the Land of Scott, the English Lake District, the Yorkshire Dales, the Peak District, the Welsh Mountains and Valleys, Shakespeare's country, Cornwall and Devon, the lovely valley of the Thames, far-famed Killarney, to mention only some of the best-known districts, are all easily accessible at moderate cost. The railway tourist tickets usually permit of breaking the journey at any point on the route, and often cover alternative routes, thus giving the tourist the greatest possible freedom of movement. The only restriction is that the whole tour must be completed within a period which is usually ample for the purpose. Full particulars of such tours can be obtained from the tourist programmes of the leading railway companies, or from the tourist agencies. The North-Eastern Railway Company has shown special enterprise in meeting the requirements of tourists. Some of the tours, notably in the Scottish Highlands, include steamer and coach journeys as well as railway travelling.

The steamer connections between Great Britain and Ireland are abundant, some of them being railway companies' services. The chief are:

Holyhead to Kingstown (2½ hours), in connection with the London & North-Western Railway; Dublin and Sillioth, via Douglas, Isle of Man; Dublin to Liverpool (8 hours), by the City of Dublin Steam Packet Company; Fleetwood to Belfast (7 hours) and Londonderry, in connection with the Lancashire & Yorkshire and London & North-Western Railways; Liverpool to Belfast (8 hours) and Londonderry, by the Belfast Steamship Company, Limited; Heysham to Belfast (6½ hours), in connection with the Midland Railway; Stranraer to Larne (1½ hours), in connection with the Glasgow & South-Western Railway; London to Dublin, calling at intermediate ports, by the British & Irish Steam Packet Company; Fishguard to Rosslare (2½ hours) and Waterford, in connection with the Great Western Railway; Cork to Fishguard, Liverpool, Bristol, Plymouth, Southampton, and London, by the City of Cork Steam Packet Company, Limited; Belfast to Glasgow, Bristol, Swansea, and Cardiff, by the steamers of William Sloan and Co.; Belfast and Waterford to Glasgow, Southampton, Plymouth, and London, by the Clyde Shipping Company, Limited; Heysham to Dublin and Londonderry, Glasgow to Dublin and Londonderry, Ayr to Belfast, and Glasgow to Portrush, by the Laird Line; Glasgow to Belfast and Dublin, by the steamers of G. & J. Burns, Limited.

Foreign Tours.—People of moderate means and limited knowledge of foreign languages will find it best to travel abroad under the ægis of a tourist agency. In this way one can have a fortnight in Lucerne, or on the Rhine, from London at a cost of seven guineas, inclusive of fares, board, and lodging; a week in Paris, a week in Switzerland, and a week on the Rhine for seventeen guineas and a half in all; a thirteen-days' cruise to the Norwegian Fiords from Grimsby for nine and a half guineas; and so on.

The nearest ports on the Continent are served by fast and well-appointed steamers from ports on the south and south-east coast of England in connection with the railways. By the fastest of these routes Paris is now within seven hours of London. The connections are as follows: South-Eastern & Chatham Railway, connecting with steamers from Dover to Calais (65–80 minutes), Dover to Ostend (3 hours), Folkestone to Boulogne (1 hour 40 minutes), Queenborough to Flushing (6 hours); London, Brighton, & South Coast Railway, with steamers by Newhaven to Dieppe (3½ hours); Great Eastern Railway, with steamers by Harwich to Hook of Holland (7½ hours) and to Antwerp (10½ hours); London and South-Western Railway by Southampton to Havre, Cherbourg, and St. Malo. These routes connect with a good train service on the Continent, by which any of the favourite places of resort in France, Holland, Belgium, Germany, Switzerland, and Italy may be reached without difficulty in a comparatively short time. Some of the trains on the Continent are especially noteworthy, such as the P. & O. Marseilles Express, from Calais to Marseilles; the P. & O. Express, from Calais to Brindisi; the Simplon Express, from Paris to Milan by the Simplon Tunnel; the Orient Express,

from Boulogne and Paris to Vienna and Constantinople; the Ostend-Vienna Express, from Ostend and Brussels to Vienna; the Sud Express, from Paris to Madrid; the Nord Express, from Ostend to Brussels, Berlin, and St. Petersburg. Most of these are trains de luxe, all first class at special fares, and tickets for them have to be taken from the International Sleeping Car Co., 20 Cockspur Street, London, S.W.

Other routes to the Continent include a longer sea passage than the above through routes, but to many this may be a recommendation. Some of the more important are here indicated: Liverpool to Bordeaux, by the Moss Line; Liverpool to Havre, Vigo, Oporto, and Lisbon, by the Booth Line; London and Granton to Gothenburg, by the Thule Line; Hull to Copenhagen, Helsingfors, and Abo, by the Finland Line; London to Rotterdam, by the Batavier Line; Hull to Amsterdam, Rotterdam, and Harlingen, by the Hull and Netherlands Steamship Co., Ltd.; Harwich and Grimsby to Esbjerg, in connection with the Great Eastern Railway; Hull, Grimsby, and Newcastle to ports in Norway and Sweden, by the Wilson Line; Grimsby to Antwerp (20 hours), Hamburg, and Rotterdam, in connection with the Great Central Railway; Leith to Rotterdam, Antwerp, &c., and Dundee to Rotterdam, by the steamers of George Gibson & Co.; Newcastle to London, Antwerp, and Hamburg (36 hours), by the Tyne-Tees Steam Shipping Co., Ltd.; Hull to Zeebrugge (12 hours), in connection with the Lancashire & Yorkshire and North-Eastern Railways; Leith to Christiania, Copenhagen, and Hamburg, by the Leith, Hull, and Hamburg Co.; Hull and London to Bremen, by the Argo Steamship Co.; Harwich to Hamburg, by the General Steam Navigation Co.; West Hartlepool to Hamburg and Gothenburg, by the West Hartlepool Steam Navigation Co., Ltd.; Newcastle to Bergen, Stavanger, and Trondhjem, by the steamers of P. H. Matthiessen & Co.; Grangemouth to Christiansand, Arendal, and Christiania, by Norwegian Royal Mail steamers; London to Boulogne, by the Bennett Steamship Co., Ltd.

The custom-house regulations are apt to cause trouble to travellers on the Continent. In practically all European countries no merchandise is admitted duty-free, but small quantities of certain dutiable goods, such as tobacco, cigars, spirits, and wine, for personal use on the journey, are allowed to go free. The registration of luggage will save all trouble and expense when it has to be transferred from train to boat or vice versa. Small registration fees are charged. On some continental railways, such as the German, there is no free allowance of luggage. Passports are not now essential for those travelling in most European countries, but they are useful as a means of identification and in cases of difficulty. Residents on the Continent should certainly obtain them.

Rundreise or round-route tickets can be obtained for most continental countries, entitling the holder to travel on the railways specified up to a certain distance. They are available for a period which depends upon the distance. Such tickets may be obtained from the tourist agencies before starting. The Belgian State Railways issue 5-day season tickets

available over the whole system at a fare of—1st class, 24s. 7d.; 2nd class, 16s. 5d.; and 3rd class, 9s. 5d. For 15 days the fares are double these. These tickets can be obtained from the tourist agencies or from the Belgian Mail Packet Office, 53 Gracechurch Street, London, E.C., but the applicant must furnish a photo of himself. In Switzerland a tourist season ticket available over most of the State Railways can be obtained for 15, 30, or 45 days. The rates for the 15-day ticket are: 1st class, £3, 8s.; 2nd class, £2, 8s.; 3rd class, £1, 16s. These tickets are obtainable from the General Agency of the Swiss Federal Railways, Carlton House, 11B Regent Street, Waterloo Place, London, S.W. The Spanish Railway Companies issue tickets for distances from 2000 to 12,000 kilometres (1243 to 7458 miles).

In Belgium and Spain the railways keep Greenwich time; in Germany, Austria-Hungary, Switzerland, Italy, Servia, Denmark, Norway, Sweden, and part of Turkey, railway time is Mid-European time, which is one hour in advance of Greenwich time; in Bulgaria, Rumania, and part of Turkey, East European time is kept, which is two hours ahead of Greenwich time; Holland keeps Amsterdam time, twenty minutes in advance of Greenwich; French railway time is five minutes later than Paris time, which is in turn nine minutes ahead of Greenwich; in Portugal the railways keep Lisbon time, 36½ minutes behind Greenwich; Russia has a variety of time standards. In Belgium, Italy, and Spain, time is reckoned to 24 o'clock on the railways.

Sea Voyages and Cruises.—A sea voyage is often recommended by medical men to those who are run down and require complete rest, pure air, and a thoroughly regular life for a week or two to tone them up. Many shipping companies offer most attractive cruises at very moderate inclusive fares. Some of these voyages involve hardly any calling at ports on the way, whilst others are varied by a number of calls, with chances of going ashore for a short time. Some of the principal companies that cater for the holiday-maker are here given.

The following offer cruises of various length in British waters: M. Langlands & Sons, from Liverpool round Great Britain, in Western Highlands, &c.; David Macbrayne, Limited, from Glasgow to Oban, Fort William, Inverness, Hebrides, &c.; Clyde Shipping Company, Limited, Glasgow to London; Carron Line, Grangemouth and Bo'ness to London; Powell and Hough Lines, from Liverpool to Falmouth, Plymouth, Southampton, Portsmouth, and London; John M'Callum & Co., from Glasgow and Greenock to the Outer Hebrides and St. Kilda; Aberdeen Steam Navigation Company, Aberdeen to London; London and Edinburgh Shipping Company, Limited, from London to Leith; General Steam Navigation Company, Granton to London; North of Scotland and Orkney and Shetland Steam Navigation Company, Leith to Aberdeen, Wick, Orkney, and Shetland; Aberdeen, Newcastle, and Hull Steam Company, Ltd.; Little Western Steamship Company, London to Torquay, Penzance, and Bristol; James Currie & Co., Leith to Newcastle, Sunderland, and Hull; Tyne-Tees Steam Shipping Co., Ltd., London to Scarborough and Middlesbrough; G. & J. Burns, Ltd.,

Glasgow and Liverpool; Aberdeen, Leith, and Moray Firth Steam Shipping Company, Ltd., Leith to Aberdeen and Inverness; Dundee, Perth, and London Shipping Company; Martin Orme & Co., Glasgow to Outer Hebrides and St. Kilda. See also some of the routes on page 232.

For sailing tours in non-British waters the following lines and companies may be mentioned: Hall's Line, London to Lisbon, Gibraltar, Malaga, and Cadiz; Papayanni and Ellerman Lines, Liverpool to Lisbon, Oporto, and the Mediterranean; P. and O. Company, Mediterranean, Norway, &c.; Elder, Dempster, & Co., Canaries, West Indies, &c.; Royal Mail Steam Packet Company, London to Canary Islands, Madeira, and Morocco, also to Norway and the Northern Capitals; Booth Line, to Spain, Portugal, and Madeira; P. H. Matthiessen & Co., from Newcastle to Norway; Wilson Line, Hull to Norway and Sweden; Leith, Hull, and Hamburg Steam Packet Company, to Norway; and Dr. Lunn's cruises.

Many will find it more to their taste to hire a small yacht for a short period and take their own course. When several combine for this purpose the cost need not be very great.

WALKING TOURS.

In touring for a holiday one's object is not only to restore physical fitness, but at the same time to see as much fine scenery as possible. A walking tour, if wisely planned, serves both purposes admirably, for walking is an excellent all-round exercise, and the walker is free to go into any out-of-the-way corner that may take his fancy. He is not confined to the roads, but may climb to the top of a mountain, or cross a wide moor, or traverse a glen by a hardly distinguishable footpath. He must be in fairly fit condition before starting, and must not overdo the walking, so as to produce fatigue and strain his physical powers. For an average person on a good road, twenty to thirty miles a day is good enough, especially if done day after day, but forty or fifty miles may be done occasionally if necessary. A steady rate of four miles per hour when on the move on a good road is as fast as one need wish; in many Highland glens two miles an hour would be more normal. The feet must be carefully attended to every night. Some recommend soaping as a protection against blistering, and powdered alum is said to harden them. The boots should be strong, with fairly thick soles, and good-fitting, neither too large nor too small. If one means to climb hills *en route*, they should have some hob-nails or tacks in the soles around the sides. Knickers are the best form of breeches for the walker, and the jacket should have plenty of pockets. On a walking tour one should eat sparingly, and it is unwise to drink much when on the move. If one is very thirsty, it is best to dip the hands and wrists in running water and to rinse out the mouth.

On a walking tour one naturally wishes to carry as little baggage as

possible, but there is an irreducible minimum that may be put in a rucksack or knapsack and carried on the back. Another bag may be sent on by rail and picked up at suitable stations, where renewals of clothing, &c., may be obtained from it. A stout walking-stick is a desirable part of one's equipment, and also a light waterproof coat. Some lint, lanoline, pieces of string, &c., for emergencies ought to be taken.

A walking tour is best done in company with one friend, but, if necessary, may be done alone with pleasure. The morning and the evening are the best times of day for walking in warm summer weather; the middle of the day is best for resting. Good maps of the route are necessary, the most useful for the United Kingdom being Bartholomew's Reduced Survey Maps, based on the Ordnance Survey. Their scale is two miles to the inch, and the land is coloured according to elevation above sea level.

CYCLE TOURING.

The last few years have seen quite a noticeable increase in touring on the bicycle. This may be attributed partly to the development of variable speed gears, which make a fortnight's luggage much less a burden to be feared than formerly, and also in some measure to a sort of revulsion from the care, complications, cost, and responsibility of motor touring. After a long experience of both, the writer very definitely prefers the great freedom of the bicycle as a touring vehicle, especially if the prime object is to see the country and its people.

Luggage must be sufficient for comfort, and its various items should be carefully and separately considered in order to keep the weight as low as possible. Even brushes and combs should be of the smallest convenient size. The man who will have a spare suit must send it forward from place to place—an unreliable and vexatious proceeding. A spare shirt and pair of stockings are indispensable even for a tour of only a week, by way of a change when wet. If one has handkerchiefs that have nearly reached the point of superannuation, they may be taken on a cycling tour and thrown away when used. Otherwise, silk ones are best. If the tourist prefers separate sleeping apparel from the spare shirt, it is worth while to have pyjamas or gown made of washing silk. It is ideal in point of comfort, while a suit and a lady's gown will pack—to the writer's knowledge—into surprisingly small and light compass. The smallest possible razor, a small pliable strop cut in two, and one of the smallest brushes on sale, suffice well for the shaver's outfit.

Rubbered waterproof garments are in universal acceptance as protection from rain, though they are very far from satisfactory. When put on, the rider's pace should at once be reduced, and care taken to keep as cool as possible. Single-texture garments only can be used for cycling, on account of the weight of the double texture. A cover coat made of single-texture

waterproof, and worn with overalls, is much preferable to a cape. The seat and upper portion of the overalls, which are covered by the coat, should be made of linen or canvas, and the extremities of the legs should be finished gaiter-wise, with a strap under the foot. Soft cloth hats, of which the brims can be turned down anywhere, are better than the usual cap, which allows water to run down the neck and into the clothing.

Waterproofs should be packed on the bicycle separately, as they are wanted quickly, and the cape-holders which attach to the handlebar are best for them. In packing the other luggage in bundles, hard items should be put in the centre, and something soft, such as a shirt, kept for the outside to take the pressure of the straps. From a maker of waterproofs procure an odd piece of double-texture coating for the wrapping of the bundle—the single texture generally used is too easily damaged, and will soon admit water. Light triangular carriers to attach to the back or front forks are the best. A week's modest luggage is well carried in a waterproof canvas bag behind the saddle, with two long straps to twist round the front of the saddle and bring back under the bag. Frame-bags are bad, as they rub the legs of the rider, and prevent him from keeping them straight. A lady's luggage, and especially the light cashmere or alpaca skirt which she reserves for the evenings, should not be strapped in a bundle, but carried in a telescopic Japanese basket, and further wrapped in the lightest waterproof cloth.

Maps on the $\frac{1}{2}$ -inch scale, or two miles to the inch, are best for cycling. They should be either those published by John Bartholomew & Co., of Edinburgh, or the new Ordnance Survey maps, for which the wholesale agent is Mr. T. Fisher Unwin, of Adelphi Terrace, London.

The luggage difficulty is solved by the admirable plan of touring from a centre, which means taking daily rides in different directions from headquarters. Exeter, Norwich, Warwick, Hereford, Shrewsbury, and York are admirably suited to this end, and Taunton, Cambridge, Harrogate, Castle Douglas, Aberfeldy (or Dunkeld), and Inverness only a little less so. A good seaside headquarters for this purpose is Bournemouth, chiefly on account of the proximity of the New Forest, and an abundance of good and easy roads.

The English Lake District is best seen by spending a few days at Ambleside and a few more at Keswick. The easiest approach from the south is to Milnthorpe, from either Lancaster or Settle, and then by Levens Bridge, Gilpin's Bridge, and Winster to Bowness-on-Windermere. The cycling titbits of the English Lakes are the road on the west side of Thirlmere, the road along Ullswater, and the Brantwood side of Coniston. There is no through road for cyclists from east to west. The Wastwater side can only be reached either from the south by Ulverston, or from the north by Cockermouth, and either involves hard work. Cyclists have crossed the Hardknott Pass and even Styhead, but such feats involve carrying the bicycle.

Of all the more mountainous parts of Britain the best for the cycling

tourist are North Wales and Galloway, the roads being of much easier gradients than in the English Lakes. Those of Perthshire are not much more difficult than the former. In Cornwall the tourist must expect to walk a good deal, for it is the coast line only which is so full of interest, and all the fishing villages are off the main roads. A fortnight is necessary to tour comfortably round the Cornish coast. Devonshire also is very difficult; only strong riders should follow the North Devon coast road from Porlock to Ilfracombe. South Devon is well worth cycling, with short daily distances. The Yorkshire Dales will become very popular when better known. Harrogate and Skipton are good places whence to begin the round. The Wye and Usk valleys together make an excellent week's tour. Cyclists with a taste for level roads and great old buildings should make the round of Peterborough, Crowland, Wisbech, Ely, Cambridge, St. Ives, Houghton, Huntingdon, and Oundle.

In Scotland the Highlands attract the majority, who are usually found between the Kyles of Bute on the west and Inverness and Aberdeen on the east, which includes material for a month or two. North and west of the Caledonian Canal there is a modicum of good cycling on the coast roads. The only direct road approach to the Highlands from the south is the Carlisle-Stirling road, which is extremely unpleasant to the east of Glasgow. The tourist who would approach the Highlands from the south may train to Edinburgh and ferry over the Forth to Burntisland or Queensferry, or train to Glasgow and from there to Dumbarton or Helensburgh. The south-west coast road is a very fine journey from Stranraer to Greenock, whence, if the Highlands are intended, steamer may be taken to Helensburgh, avoiding Glasgow altogether, if that is considered desirable. A highly attractive Lowland tour is to leave Moffat by the Devil's Beef-tub and follow the Tweed all the way to the sea at Berwick.

County Kerry is the best of Ireland. Landing at Cork, the tourist should ride west as far as Waterville, and then back through Killarney to Cork. County Wicklow is beautiful, and close to Dublin. Donegal, Connemara, and the Antrim coast road remain to be visited. Generally speaking, the roads are bad, except in Antrim.

The following itineraries are suggested:—

In Devon and Cornwall, starting from Taunton, which is a good railway centre: Crowcombe, Williton, Washford, 18; visit Cleeve Abbey and Old Cleeve, returning to main road for Dunster, 4 from Washford; Wheddon Cross, Dulverton, Tiverton, 28; Exeter, 15; Starcross, Dawlish, Teignmouth, 16; Torquay, 8; Paignton, Totnes, 9; river excursion to Dartmouth and back; Brentbridge, Plymouth, 23; Pottery Quay, Torpoint (by ferry), Polbathick, East and West Looe, 16; Polperro, Polruan, 10; ferry to Fowey; Lostwithiel, 7; Restormel Castle, through Lanhedock Park, High Cross, Victoria, 11; Blue Anchor, Ladoek, Truro, 18; Penryn, Falmouth, 11; Penryn, Helston, 12; Lizard Town, 10; see Kynance Cove at low water, and walk along cliffs to Cadgwith and back; Marazion, Penzance, 13; see Newlyn and Mousehole; Land's End, 10; Sennen, St. Just, Morvah, St. Ives, 18; St. Erth, Hayle, 4; if convenient, take train here to Scorriergate in order to miss the tramways of Camborne and Redruth; Scorriergate, 12; Zelah, Blue Anchor, 15; St. Columb, Padstow, 13; ferry to Rock; St. Minver, Endellion, Port Isaac, 7; Trebarwith, Tintagel, 10; extreme care is necessary approaching Boscastle, 4;

Wainhouse Corner, Stratton, Bude, 16; Stratton, Kilkhampton, Clovelly, 16; through the Hobby Drive, Bideford, 11; Instow, Barnstaple, 9; Muddiford, Ilfracombe, 12; Combe-martin, Parracombe, Lynton, 17; cliff railway down to Lynmouth; Watersmeet, Hillsford-bridge, Brendon, Oare, walk down hill into Porlock, 12½; Minehead, 6; Washford, 6½; and as before to Taunton. About 500 miles. The danger boards on this route should be carefully respected.

All that is best of the English Lakes may be seen as follows, starting from Carnforth, which is on the London & North-Western main line, and well served by other companies: First day, Milnthorpe, Levens Bridge, 10; Lindale, Newby Bridge, 12; (2), Haverthwaite, Greenodd, 5; Ulverston, 3½; Lindal, Dalton, Furness Abbey, 7; Greenodd, 10½; cross over Lowick Bridge, 3; Nibthwaite, Brantwood, Coniston, 9; (3), Climb Old Man and ride by Skelwith Bridge to Ambleside, 8; (4), Skelwith Bridge, Dungeon Ghyll, 8, whence Langdale Pikes may be climbed, back to Ambleside, 8; (5), Hawkshead, Sawrey, Ferry Hotel, 8; cross lake by ferry, Bowness, Ambleside, 6; row on lake, visit Stock Ghyll Force, or climb Wansfell; (6), Grasmere, Dunmail Raise; at one mile beyond top of pass take sharp turn left for west side of Thirlmere, to Keswick, 17; climb Latrigg or row on Derwentwater; (7), Take first train to Penruddock; Stainton, 4; half a mile farther turn right; Dalemmain Park, Ullswater, 3; Glenridding, 7½; back nearly to Aira Bridge, and turn left to Dockwray, Troutbeck Station, Threlkeld, Keswick, 16; (8), Portinscale, Hause End, Grange, Lodore, Keswick, 9, a hard round, in the morning; Little Crowthwaite, Castle Inn, Bassenthwaite Lake Station, Portinscale, Keswick, 17, in afternoon; (9), Lodore, Borrowdale, Rosthwaite, Seatoller, 7; here pass through gate, having asked for key and paid toll, and take *new* Honister road; at top of climb dismount and walk down; Buttermere, 7; Scale Hill Hotel, Loweswater, Lamplugh, Kirkland, Ennerdale Bridge, Ennerdale Lake, 14; (10), Egremont, 8; Calder Bridge, 4; Gosforth, Wasdale village, 6; Wasdalehead, 5½; (11), This being the best climbing centre in the Lake District, the day may be spent in the ascent of Scafell or some other mountain; (12), Santon Bridge, Holmrook, 11; Muncaster Station, Bootle, 9. Southwards the roads are now extremely hilly, for which the scenery only partially compensates. The train may be taken here; or, without coming any farther south than Gosforth, a day may be spent at Seascale, a little seaside place with golf links.

Route for an extended tour in Wales, including the valleys of the Wye and the Usk, from Shrewsbury and back there: Oswestry, 17; Gobowen, Chirk, Llangollen, 12; Corwen, 10; Cerrig-y-Druidion, Pentre Voelas, Bettws-y-Coed, 22; Llanrwst, Talycafn, Conway, 15; Penmaenmawr, Bangor, 15; Menai Bridge, Beaumaris, 7; Bangor, 7; Bethesda, 5; top of Nant Ffrancon Pass, 5; Capel Curig, 5; top of Llanberis Pass, 6; Carnarvon, 13; Snowdon Ranger, 8; Snowdon Station, 2; Beddgelert, 3; Pont Aberglaslyn, Portmadoc, 8; Penrhyndeudraeth, 3; Tan-y-Bwlch, 4; Maentwrog, Harlech, 9½; Barmouth, 11; Dolgelly, 10; Cross Foxes, Minffordd, 7½; Tal-y-llyn, Towyn, 12; Aberdovey, Machynlleth, 14; Talybont, Bow Street, Aberystwyth, 20; Capel Sion, Devil's Bridge, 12; Dyffryn-castell, Llangurig, 16; Rhayader, 9; Builth, 13; Llyswen, 11; Bronllys, Brecon, 22; Bwlch, Crickhowell, 14; Abergavenny, Raglan, 15; Usk, 5; Llangwm, Chepstow, 14; Tintern, Monmouth, 16; Whitechurch, Symond's Yat, Goodrich Castle, Ross, 12; Hereford, 14; Leominster, 13; Ludlow, 11; Church Stretton, 15; Shrewsbury, 13. Total, 476 miles.

The following itinerary begins with rural, secluded, and picturesque parts of Essex and Suffolk, including "The Constable Country", goes on to the Ouse and Fenland, visits the Norfolk coast, affords a glimpse of the Broads, and returns to within easy reach of London:—

From Epping to Harlow, Hatfield Heath, Hatfield Broad Oak, Takeley Station, Broxton, 20; Great Dunmow, 5; Little Waltham, Hatfield Peverel, Maldon, 19; Tolleshunt d'Arcy, Abberton, Fingringhoe, Wivenhoe, 15; Greenstead, Ardleigh, Manningtree, 11; East Bergholt, Dedham, Stratford St. Mary, Stoke-by-Nayland, Nayland, 11; Bures St. Mary, Sudbury, 9; Long Melford, Cavendish, Clare, Stoke-by-Clare, 12; Steeple

Bumpstead, Finchingfield, Great Bardfield, Thaxted, 15; Great Sampford, Radwinter, Saffron Walden, 11; Cambridge, 14; Eltisley, St. Neots, 17; Huntingdon, 9; Godmanchester, Houghton, St. Ives, 7; Earith, Ely, 18; Littleport, Wisbech, 24; King's Lynn, 13; Castle Rising, Snettisham, Hunstanton, 16; Brancaster, Overy, Wells, 17; Stiffkey, Holt, 11; Cromer, 10; Roughton, Aylsham, Norwich, 22; Acle, Burgh St. Margaret, Filby, Caister, Yarmouth, 22; Fritton, Herringfleet, Lowestoft, 13; Wrentham, Wangford, Blythburgh, 13; Yoxford, Saxmundham, Wickham Market, 17; Woodbridge, Ipswich, 12.

The following are itineraries for the more accessible parts of Scotland:—

Western Highlands.—Glasgow to Bowling, 11; Balloch, 7; Luss, 8; Ardlui, 17; Crianlarich, 9; Tyndrum, 5; Dalmally, 12; Taynuilt, 14; Connel Ferry, 7; Oban, 5; Connel Ferry, 5; Struan Ferry, 5½; Ballachulish Ferry, 17; Fort William, 12; Spean Bridge, 10; (right, Kingussie, 40); Fort Augustus, 22; Inverness, 34. The train might be taken between Tyndrum and Dalmally, as the road is not good.

Central Highlands.—Inverness to Carrbridge, 25; Aviemore, 7; Kingussie, 12; Blair Atholl, 38; Pitlochry, 7; Ballinluig, 5; Dunkeld, 7; Perth, 15; Milnathort (via Glen Farg), 16; Stirling, 24. (Or Ballinluig—Aberfeldy, 10; Killin, 23; Callander, 21; Stirling, 16.)

East Coast.—Inverness to Nairn, 16; Elgin, 22; Fochabers, 9; Huntly, 18; Inverurie, 23; Aberdeen, 16; Stonehaven, 14; Bervie, 10; Montrose, 12; Arbroath, 13; Dundee, 17; ferry to Newport, St. Andrews, 11; Pittscottie, 6; Cupar, 3; Kettlebridge, 7; Kirkcaldy, 11; Burntisland, 6; ferry to Granton, Edinburgh, 3.

Border Counties.—Edinburgh to Peebles, 23; Innerleithen, 6; Galashiels, 12; Melrose, 4; Selkirk, 7; St. Mary's Loch, 19; Moffat, 15; Lockerbie, 16; Gretna Green, 15; Carlisle, 9; Longtown, 8; Langholm, 12; Hawick, 23; Jedburgh (by Bridgend), 14; Kelso, 11; Coldstream, 9; Berwick, 15; Dunbar, 30; Haddington, 11; Edinburgh, 17.

France is the finest country in the world for the cycling tourist. Except in the north-east, the roads are everywhere excellent, and even in the most mountainous districts they are superbly engineered. In the French Alps of Savoy and Dauphiny the cyclist has all the advantages of Switzerland, without any of its very numerous drawbacks. Clean and reasonable hotels, where an excellent dinner of several courses is served at 7 p.m., are found in every town and large village. In Brittany, in which riding should begin at St. Malo or Brest, the cost of touring is not more than 6s. a day. Belgium is not attractive to the cyclist except in the Ardennes, which are equally in France. The roads are better in Denmark and Germany, to which the touring cyclist is freely admitted.

CARAVANNING.

To those who like to escape occasionally from many of the restraints and ceremonials of ordinary civilized life, there can be no finer holiday than one spent in a caravan. The caravan is at once a house, a means of travel, and a conveyance for luggage, and the caravanners can go wherever there are roads and stop wherever they can find a camping-ground. There need be no real "roughing it", for a caravan can carry many of the more necessary com-

forts of daily life, and yet there is ample scope for any domestic accomplishments that a man may possess. The caravan should be as light and roomy as possible. A ton weight is ample, and can be drawn by a single good horse, which may be hired, or bought, and sold again after the holiday is over. There may be three rooms in it: a bedroom at the back, a sitting-room in the middle, and a kitchen or cooking-room at the front; but in good weather the chief place for all purposes but sleeping will be the open air. Underneath there will be boxes for stoves, pots, pans, &c., and hooks for lamps, buckets, nosebags, &c. The windows must be fairly large and made to open. A good brake is essential. Tents may be carried for additional accommodation. The camping-place will usually be on a farm, where various kinds of produce can be purchased and the horse can be put up. Caravanners will mostly walk the route, unless down an easy slope. A distance of thirty miles a day can be covered easily on a caravan like that indicated above, and in the course of two or three weeks' holiday one can enjoy a delightful tour of hundreds of miles amid glorious scenery. See Cameron's *The Book of the Caravan* (Upcott Gill) for fuller particulars.

CAMPING.

In the last few years much thought has been expended in devising a camping outfit which, while thoroughly serviceable, should at the same time be sufficiently light for easy transport either on a walking or on a cycling tour.

Walking.—For a pedestrian the impedimenta need only be very simple: tent, poles, pegs, waterproof ground sheet, eider-down quilt, cuisine with spirit lamp, and knapsack. The weight is about 12 to 12½ lb., and the outfit is the minimum recommended for light-weight walking tours. The first four articles cost 40s. or 42s., the remainder, 43s. or 45s. This provides for a single tent of "Gipsy" pattern, measuring 6 ft. long × 4 ft. wide × 3 ft. 9 in. high; but such a tent can by simple manipulation accommodate two persons comfortably, so that for two the only additional weight of consequence is a quilt, say 1 lb. 8 oz. If a sleeping-bag is used in place of the quilt, the weight is not reduced much, but the cost is less, say about one-third of a quilt. When there are two pedestrians, as the outfit to be carried by each is not much, it is advisable to take a paraffin stove like the "Primus" in place of the spirit stove. Away from the towns it is difficult to get a fresh supply of methylated spirits of wine, but paraffin is readily obtainable anywhere. A knapsack or a rucksack is the best mode of conveyance, though it is usually found more convenient to have the cuisine in a separate hand-case. In a knapsack the tent and quilt are more economically stowed than in a rucksack.

Cycling.—The cyclist can carry a much greater weight than the pedestrian. He should have a "Primus" stove and more and larger cooking

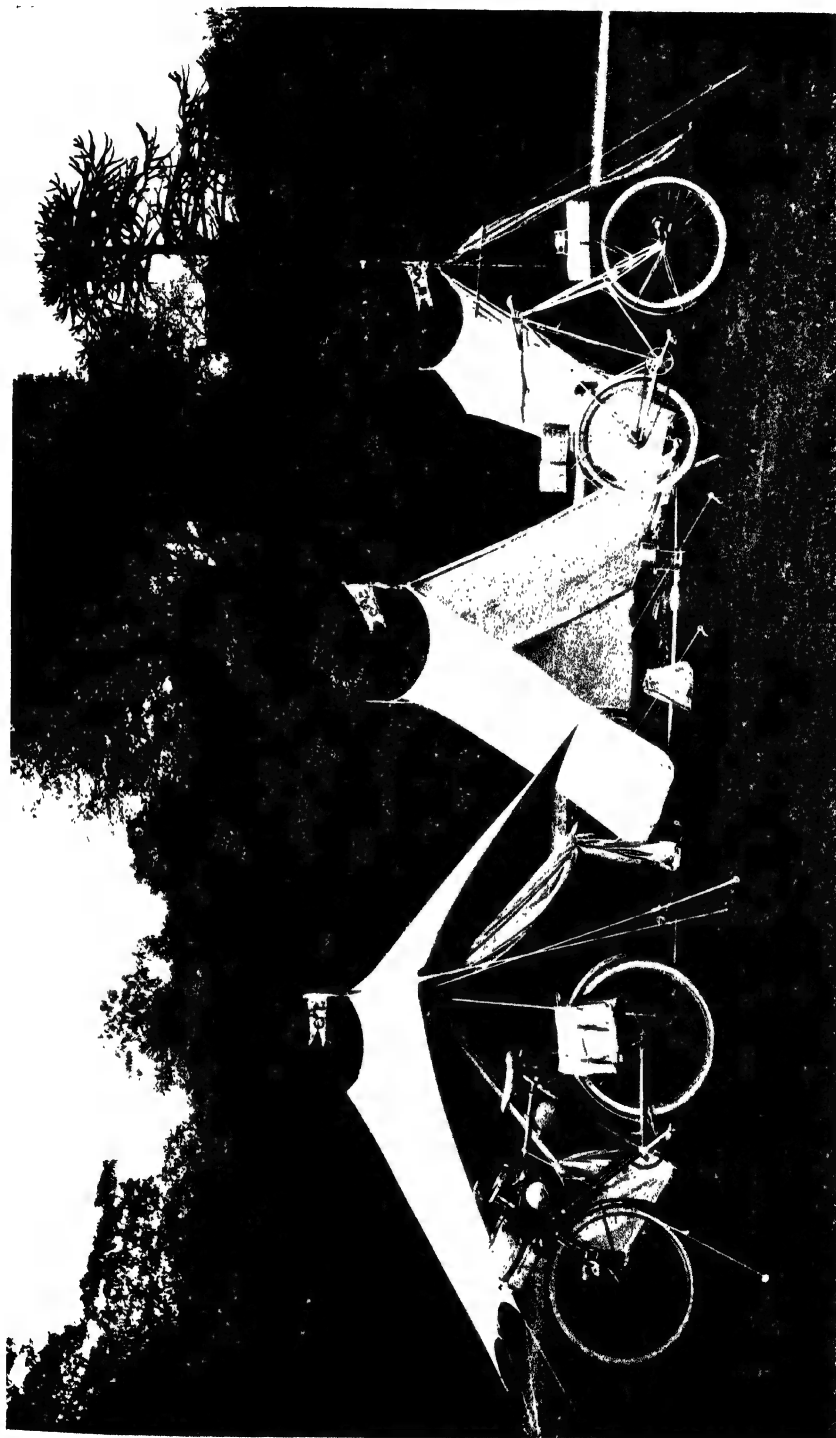
utensils, and, if he seeks extra comfort, a ground blanket and fly sheet. A very full kit for one cyclist need not weigh more than 16 or 17 lb., including carriers. The cyclist's outfit is most conveniently carried in Japanese baskets. The plate shows bicycles with complete camping outfit ready for the road. The camping cyclist should have a machine with a two- or three-speed gear, especially in a hilly country. On the level road the weight does not hamper one, but on the hills a single gear makes walking imperative. For cyclists going in pairs the double "Gipsy" and small "Cottage" tents of the Amateur Camping Club will be found to give excellent accommodation. For three, the "Canadian" tent made by Mr. T. H. Holding is very satisfactory. (See the plate, PORTABLE TENTS.)

General.—After having fixed the size and style of tent wanted, the question arises what exactly should the camper carry over and above the foregoing kit. That is a matter for each individual to decide for himself. A waterproof coat or jacket and a sleeping dress may be considered essential even for one travelling with a minimum weight on a short holiday. They cannot be dispensed with on a prolonged holiday. For other things the camper must be guided by circumstances and his own choice as to what he should take. He may want the comfort of a fly sheet and a ground blanket, a down pillow and a sleeping helmet. Where provision is plentiful, he need carry very little with him in the way of foodstuffs. On the other hand, in travelling in out-of-the-way parts, or having a fixed camp away from a convenient source of replenishment, more attention should be given to the culinary department. A little experience suffices to give the camper an exact knowledge of what provision he should make for any occasion.

When ordinary common-sense precautions are taken, there is no danger to health in camping in this country. It is the experience of campers that colds are not only most rarely contracted in camp life, but that it hardens one against colds. The primary consideration is the site for the tent. Marshy or low-lying ground should be avoided, as mist readily gathers in hollows; and in a high wind an exposed knoll is not an ideal spot. A corner behind a hedge or wood, or the high bank of a stream in a hilly countryside, usually provides good shelter. In wet weather the tent should not be erected under trees, as the heavy drops from the leaves may cause a spray through the roof.

Throughout England, and to some extent in other parts of the country, the Amateur Camping Club has arranged for the use by members of a large number of suitable camping sites. In Scotland one can get camping ground without difficulty almost anywhere away from the large towns.

Camping nowadays is not confined to gentlemen. Ladies are taking up this enjoyable form of holiday-making in increasing numbers, and the Amateur Camping Club has a fair number of ladies among its members. The A.C.C. has done excellent work in the perfecting of the camper's kit, and the novice cannot do better than get into communication with the secretary (6 Duke Street, Adelphi, W.C.), who will gladly supply much fuller information than it is possible to give in a short article.



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PORTABLE TENTS

1, "Cottage" Tent; 2, "A" Tent; 3, "Gossy" Tent

MOUNTAINEERING.

Mountaineering may mean anything from rambling over grassy slopes to an attempt to reach the high summits of the Himalaya. Omitting such extremes, the subject will be regarded from the standpoint of one who is ready to face some difficulty, and who wishes to acquire such proficiency as he can, but whose opportunities are limited to short holidays.

This may include both British and Alpine mountaineering, between which there are many differences. Some depend on the relative size of the mountains; ten or twelve hours would be a short day in the Alps but a fairly long one at home; in the Alps the start is seldom so late as 4 a.m., while for all the bigger expeditions a night in a high hut or sometimes in the open is needed. In the Alps bad weather means serious danger, while in Britain an experienced party will ascend with safety any mountain under almost any weather conditions. At home we have nothing to compare with the "icefalls", the "dry glacier" with its gaping crevasses or the "névé" with its concealed ones, and our avalanches are very small.

It does not follow that British mountaineering is easier. The average pace is perhaps harder than in the Alps, and guides are almost unknown. Alpine climbing without guides is only justified by long experience, and the climber with guides has no responsibility for finding the way, for cutting steps, or for carrying baggage. The guide does the hard work, faces the difficulties, and is responsible for the safety of the party. Given an ordinary amount of stamina, and a purse sufficient to pay for plenty of assistance, it is possible for the veriest duffer to be taken up many of the famous Alpine climbs, and to know nothing of the difficulties surmounted, the dangers avoided, or the skill required. At home guideless climbing is the rule, and while the members of a party may differ widely in skill, they share the labour, the responsibility, and the consequent experience and pleasure.

Nor is home mountaineering necessarily safer. The very smallness of our mountains has led to their minute exploration and the discovery or invention of difficult routes. When the easiest route involves a long and hard day there is little inducement to look for difficulties, but when it is only a matter of an hour or two the case is different. To such an extent has the search for difficulties been carried in the Lake District and Wales that every face is charted and marked with climbs, many of them difficult, and some of such extreme difficulty and danger that they are entirely unjustifiable for the great majority of even competent mountaineers. This practice has developed very skilful rock-climbing, and has thus been of great service to mountaineering; but it has been marked by numerous disasters, and these show no tendency to become less frequent. It has fostered a belief that a mountaineer's qualifications are to be measured by his skill in what is really only one branch, and has led ambitious

climbers to most foolhardy attempts. Unfortunately the discredit which really only belongs to reckless rock-climbing is apt to attach to mountaineering as a whole.

A man may be a brilliant cragsman, and yet a very poor mountaineer. There are other important branches, and to be a "safe" man—the character which of all others is most esteemed—all-round proficiency is more important than special brilliancy in any one department.

A mountaineer should first of all be a good "route-finder". Expeditions on our British mountains, undertaken not only in clear but also in misty weather, and with entire dependence on map and compass, give excellent experience. The beginner may select mountains where he is free from serious danger, although the final development may be that he looks for difficulties and overcomes them. Before attempting any difficult route the mountaineer should be familiar with the topography of the mountain, and able to find his way off it in any direction and in any weather. Stories have been told of "rock-gymnasts"—they could not be called mountaineers—who, when caught in mist, could find no way off an easy mountain except the fancy route by which they had ascended.

Rock-climbing, of course, must not be underrated. It is a most fascinating and a most important branch of mountaineering, in which a high degree of skill can be attained. It is not only that a skilled climber will make his way up with ease and comfort, and his way down with safety, where a novice would see nothing but impossibility: a very inferior climber may succeed in getting over a difficult climb, but in doing so he may have exposed himself and his companions to danger which a skilled man on the same climb would not have incurred. A good climber not only finds holds for hand or foot which the other would not notice, but he can judge with accuracy how much each is to be trusted, and how far he can trust his own powers; each step which he takes is taken with deliberation and care, and his daring is not the outcome of recklessness, but of judgment and knowledge. "Chancing it" has no place in his methods; if he goes up a difficult place, he not only knows that he is secure at every point, but that he can get safely down again either by the same or another way. He is familiar with the use of friction grips and the other expedients which make up for the absence of actual holds, and is ingenious in applying his knowledge; and, finally, if the safe conquest of a certain difficulty is beyond him, he accepts the situation and leaves it alone. The use of the rope is an important study. In any place where a slip might have serious consequences the rope is used, and for the majority of mountaineers no ascent is justifiable where the rope does not give to every member of the party a great measure of security. Any climb where the rope is a danger instead of a safeguard—that is, where the fall of one would pull down the others—is quite unjustifiable. The leader in an ascent, or the last man in a descent, gets least security from the rope, and if he had a clear fall from any height the rope would not hold him, but would certainly break. Any climb which involves this risk is on the

border line of the justifiable. Every member of a roped party shares the responsibility for its proper use. Every possible hitch should be used, so that any jerk due to a slip would come on the rock and not on the person; the rope must never trail or hang loose, but it should be paid out as required and looped up at once when not needed, and it must not be allowed to catch on projections. A good climber neither dislodges loose stones himself nor allows the rope to do so. The various ways in which skill comes into play are innumerable, and the best way to learn is to follow a good man.

This holds true in snowcraft as well as rock work. It is in the department of snow and ice that the Alpine guide specially excels the amateur, who is often quite as good a rock-climber. This relative inferiority is partly due to the less opportunity of practising at home, but the opinion is largely held by experienced mountaineers that snowcraft is a more difficult branch, although a less showy one, than rock-climbing. To learn it thoroughly, experience outside of the British islands is essential; we have ice and snow in plenty, but glacier knowledge implies far more than that. The problems due to the movement of the glaciers—how to avoid the insuperable difficulties and overcome those which are unavoidable; how to get through a complicated ice-fall or over a wide crevasse; how to traverse a glacier which is intersected with concealed crevasses; how to judge the safety or otherwise of a route under conditions which vary with every hour of the day—are altogether beyond our home experience. So are most of the problems connected with falling masses of snow and ice or with falling stones, although some of these on a small scale are not unknown here.

Mountaineering in Great Britain under more or less alpine conditions is, however, not impossible, and the development of this is interesting. It is now over fifty years since the formation of the Alpine Club, and for many years the members of that club found ample scope for their energies in the mountains, then largely unexplored, which give it its name. As years went by many of its members looked for wider spheres, and its scope has extended over every mountain range in the world. Meantime it occurred to some enthusiasts in Scotland that winter mountaineering there might fairly compare with Alpine work, and, with the hearty co-operation of a number of prominent members of the Alpine Club, the Scottish Mountaineering Club was formed in the beginning of 1889, with the avowed object of encouraging mountaineering in Scotland in winter as well as summer. As Scotland possesses nearly 300 mountains which reach the height of 3000 feet, more than fifty of these being higher than Snowdon, it was obvious that for snow climbing it had a great advantage over the sister countries. This advantage has been fully utilized, and the mountains have been thoroughly explored. The merest indication of the result is all that is possible here, and only the districts which are readily accessible will be named. The nearest station and hotel are indicated, and it should be borne in mind that many of the mountains

are in strictly preserved deer forest, but that at the best climbing season (which for snow mountains is from January to April) there is little difficulty in obtaining permission to traverse most forests. The Club holds climbing meets at various times and places, and the proprietors of the Scottish forests, from His Majesty the King downward, have met the Club (whose rules provide that its members must respect proprietary and sporting rights) in a generous spirit. For purely snow climbing the high mountains of central Scotland are the best. Ben Lawers and the Glen-Lyon hills (Killin station and hotels), Ben More and his neighbours (Criannlarich and Luib stations and hotels), Ben Lui (Tyndrum), and the peaks round Loch Tulla (Bridge of Orchy being the nearest station and Inveroran the nearest hotel), are all easily approached. The Central Grampians are not so easily reached, though some may be climbed from Blair Atholl or Dalwhinnie; and the Cairngorms are inconveniently far from either Aviemore on the west or Braemar on the east.

For combined snow and rock work Ben Nevis is supreme. Its long range of precipitous cliffs, about 2000 feet high in places, is broken into ridges and gullies, some of which are fairly easy, some difficult in any circumstances, and all changing with the conditions of season and weather. Fort William is a convenient starting place. The Glencoe mountains, and especially Buchaille Etive, have some famous climbs, chiefly rock. Clachaig and Kingshouse Inns are handy for these mountains, but far from accessible. For rock-climbing Skye is without rival in Britain, whether for the number and grandeur of the mountains or the quality of the rocks. Sligachan, 10 miles from Portree, is the only available hotel. While a number of the Skye climbs are catalogued, the mountain area is so big that the pleasure of mountain-wandering and exploring unknown places may still be enjoyed. Such wandering is free and unrestricted at any season, and the summer is best. Winter and spring are too cold for Skye climbing, and autumn is very apt to be wet. It should be remembered that the Skye rocks are magnetic, and the compass unreliable. On a smaller scale the mountains of Arran (Brodick or Corrie) and the Cobbler group (Arrochar) have given a great amount of interesting material for the rock-climber. The journal of the Scottish Mountaineering Club forms a record of the twenty years of exploration, but unfortunately the earlier and some of the later numbers are very scarce.

In England and Wales snow climbing is of little consequence, but, on the other hand, rock-climbing has been very highly developed. The chief English centre is Wastdale Head, and its claim to be the best school in the world for rock-climbing is not without foundation. Some of the most famous climbs, such as the Napes Needle and the Pillar Rock, are scarcely mountain ascents, but most of the climbs are the ascent of otherwise easy mountains, such as Scafell, Great Gable, or Pavey Ark in the adjacent Langdale, by the "wrong" side. For hill-walking the whole of the Lake District is delightful, the scenery both of mountain and valley

being very beautiful, and it has the advantage for the cautious wanderer that he is never so completely in the wild as he often is in Scotland.

Welsh climbing centres round Snowdon. This beautiful mountain, with its spurs and neighbours, has, like the Lake District, been very thoroughly explored, and numerous routes have been made up their steep faces. It is of the utmost importance to remember in both these districts that many familiar climbs are only for adepts.

Fig. 647 shows a typical mountaineering outfit. The rope should be

"Alpine Club" rope, which is made in England; a party of three would probably carry a 60-foot length. English-made ice-axes are excellent, but equally serviceable axes can be got in the Alps for half the price often charged here. The boots have to be strong and comfortable, and the edge nails are of great importance. Those shown are set apart, each nail being driven right through the edge of the sole, and clinched; but an equally popular method is to use rather smaller nails, overlapping like the slates on a roof. "Puttees" (visible as two rolls beside the boots) are the best

form of gaiters; spiral puttees are easiest to put on, but straight puttees well put on are at least as good. The rucksack (which has quite superseded the knapsack) is made of waterproof material of strength proportioned to the weight to be carried. The gloves shown are for snow or ice work, and have no separate fingers; for rock-climbing old leather gloves are useful. The knitted helmet is pulled right over the head, a hole being left for the face. The hat is useful as a protection from the sun; both should be taken on a snow expedition, if there is any chance of sunshine. Round the hat are usually carried the goggles, with neutral-tinted glasses; these are absolutely essential when on snow in bright light. The leather case contains the compass. The rucksack should contain food (*not* in the form of meat sandwiches), and for winter expedi-



Fig. 647.—Mountaineering Outfit.

1, Helmet; 2, gloves; 3, ice-axe; 4, compass in case; 5, rucksack; 6, hat, with goggles; 7, puttees; 8, boots, showing nails in soles; 9, rope.

tions a Shetland jersey. The maps are assumed to be in the climber's pocket.

In recent years mountaineering books have been very numerous, but the volume on Mountaineering in the Badminton series has not been improved upon. It is the production of a number of first-class experts, and its advice is eminently sound. The corresponding volume in the "All-England" series is also good in a smaller way. Both were written before British mountaineering attained its present importance, but otherwise are in no way out of date. Baddeley's *Scotland*, Part I (1909 Edition) gives useful information about Scottish climbing districts.

Every mountaineer holds that "there is no sport like mountaineering". It demands and develops every desirable quality of body and mind. Strength and endurance, nerve and pluck, cool judgment and prompt decision, knowledge and application of natural law, comradeship and loyalty, and a keen love of nature, are among the characteristics which lead a man to become a mountaineer, and which grow and flourish among the mountains.

CHRISTMAS AND OTHER FESTIVALS.

Christmas.—Christmas will always keep its place as the head and chief of all the yearly festivities. Among the ancient Britons, the time of the winter solstice, when the sun turned his face again to earth and the short days began to lengthen, was kept with extravagant joy. One of the ceremonies was the cutting of the mistletoe, which was done by the Druids with golden knives. The early Church transformed the Pagan to a Christian festival, and the darkest days of the year are now made beautiful with sacred thoughts, with holy incentives to peace and love, keeping besides the ancient associations of mirth and cheerfulness.

Christmas Decorations.—The Yule log, the boar's head, and great boughs of holly and yew represented mediæval ideas of celebrating Christmas. Modern times preserve the same spirit in more refined forms. Guests are added to most family circles, but perhaps hosts do not always realize what a warmth is given to the welcome by the red berries on the walls and by the observance of old Christmas rites. There is a glow and geniality in all Christmas customs that cheer and brighten young and old.

Many housewives object to Christmas decorations, fearing that the furniture and paper may become scratched and spoiled. The decorators should bear this fear in mind, for beauty at Christmas will not pay for ugliness all the year round. Holly, the very prettiest and most Christmas-like of all adornments, does undoubtedly scratch and tear; it is therefore best used chiefly in bouquets for jars and vases. In this way it can be scattered about the room very effectively, and can also be kept in water. People are apt to imagine that holly, as an evergreen, needs no nourishment; but, like all other plants, it lasts twice as long if kept moist. Very pretty decorations can be made of the berries and leaves by pulling them off the stems and sewing them in various designs on strips of paper, but the berries so used turn black quickly. Persons who spend much time over decoration often preserve mountain ash or other berries in salt and water for use at Christmas.

Ivy is the safest, because the softest, of leaf decorations for walls; and ivy leaves sewn, one leaf overlapping the other, on strips of paper, make a very effective bordering for pictures or doorways. Laurel leaves, both green and variegated, and the leaves of evergreens, can be used for the same purpose. Another scheme for the walls is to cut out various shapes in stiff brown paper or cardboard, and to sew sprays of greenery on them. Crescents, shields, and banners are among the most effective patterns. The

border should always be of smooth leaves, ivy or laurel; but in the centre sprays of holly, yew, fir, golden euonymus, or red-leaved bramble may be introduced. A tasteful designer can invent many striking combinations. If a string is sewn on to the paper at the back, these designs can be hung on the walls instead of above or under pictures. A good decorative effect is produced by removing some of the ordinary knick-knacks of a room and replacing them with articles specially made for Christmas. High-handled baskets filled with moss and holly look pretty on the tables, and for the usual brackets fresh ones made of green twigs can be substituted. Any

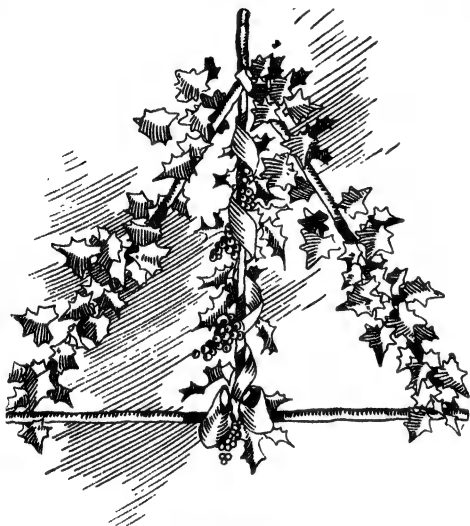


Fig. 648.

boy or girl with a taste for carpentering can construct these. Four sticks or flat pieces of wood are necessary. (See fig. 648.) Two meet in a V shape at the back, one goes across the top of the V, and from this a centre longer piece comes down a little beyond the point of the V. The wood is firmly nailed together, and ivy or other evergreens tied or twined round every piece. For the centre bar holly is admissible, as there it can scratch nothing. The wood may be gilded and allowed to shine through; or, if red berries are scarce, knots of red ribbon may be tied among the leaves. In fact, these evergreen brackets give scope for endless

variety. They may be hung safely from a nail by a loop of cord at the back.

Christmas parties are often so large that some unfurnished room is used, or a hall or gallery is temporarily turned to new use; in the country sometimes a barn is hastily fitted up. The bare walls in this case need quick and cheap decoration. If it is not too expensive, nothing is so effective as covering them with pink sateen, lightly tin-tacked on, with hanging garlands of green upon it; or pink crepon paper might be put on instead of sateen. But if something yet simpler is needed, let the walls be left bare, and place at regular intervals the crescents and shields of green sprays mentioned above, and the evergreen brackets. The coloured pictures from Christmas numbers of magazines and other periodicals with borders of ivy leaves have quite a handsome effect used amongst these; and if further touches of colour are desired, half a dozen or more of old Christmas-cards tacked together in a sort of crazy patchwork style in pretty shapes look extremely well.

Mottoes are an old-fashioned form of decoration, but very appropriate for bare rooms, and also for dining-rooms and halls. The most effective are



those with letters cut out in thick white wadding, gummed or tacked on to crimson paper or cloth. The letters should be large and bold, so as to be read at a glance. In these things the simplest devices are often the best. Letters cut from crimson, blue, or gold paper on a white background are always pretty. (See figs. 649, 650, 652, 653.) An old-fashioned kind of wafer, used in the days before envelopes had gummed flaps, and still perhaps procurable at some stationers', formed an excellent material for motto-making, being very easily arranged and most striking in their variety of hue. The wafers were round, of every colour, and adhesive when damped.



Fig. 649.

Holly should, of course, be in evidence on the Christmas dinner-table. The sprays may be tucked among the dishes of fruit, and appear in a high vase on the top of the epergne, and also in low vases along the border of the table-centre. A strip of scarlet silk or sateen, edged with white wadding, on which are scattered white glass beads dipped in gum to make them adhere, may be substituted for the everyday table-centre. The napkins could be tied with fanciful bows of narrow scarlet ribbon, the true Christmas colour. Wax candles in ivy-wreathed candlesticks lend much beauty to the table.

Christmas Festivities.—From Christmas decorations to Christmas-trees is a natural step. Though said to be introduced into England only during Queen Victoria's reign, the Christmas-tree has taken firm root in every household where there are children. Towards the end of December in most florists' shops are to be seen the short, sturdy firs, which are the popular shrubs for the purpose. A small one costs about four shillings. In Germany, the birthplace of the Christmas-tree, flowers and tapers are its chief adornment. The lighted tree stands in the middle of the family sitting-room, and round it on small tables lie the Christmas gifts, one for each person. But in England the trees generally bear more substantial fruit. Bon-bons, toys, dolls, baskets of sweets, are all appropriate, so long as each article shows up brightly or glitters against the dark background of the boughs. Too costly gifts should be avoided; children are only spoiled

by being accustomed to expensive presents, which, moreover, form a heavy tax on the hostess's purse. A good plan is to have every article of the same value. This prevents all jealousy among the young folk. Any toy-shop proprietor will furnish a supply of pretty articles at sixpence or a shilling in great variety. If home-made gifts are preferred, dolls, pin-cushions, muslin bags of sweets and nuts, give unfailing pleasure to the

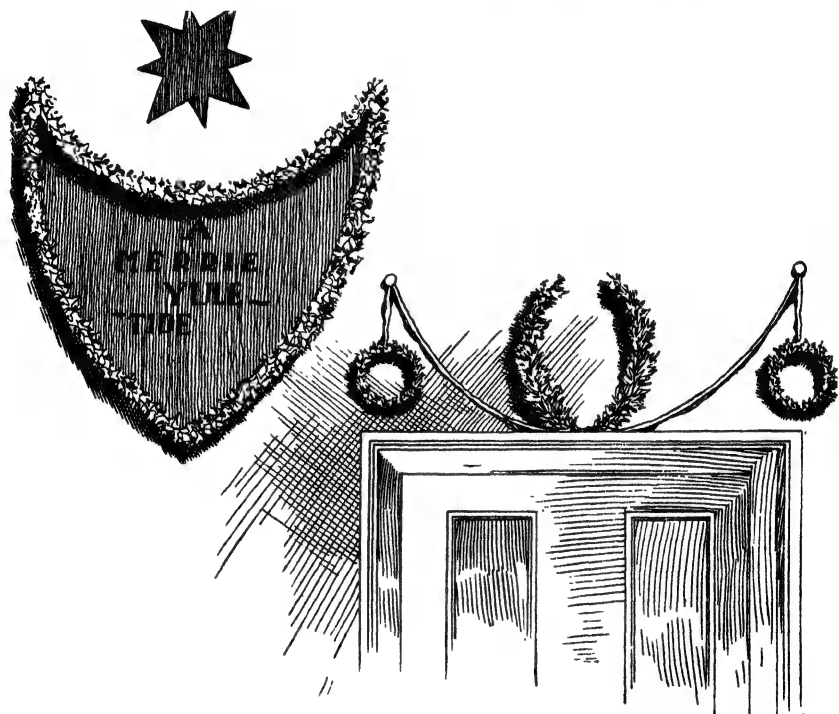


Fig. 65A

little recipients; while ribbon bows, strings of bright beads, loose braided chains of gilt or silver paper, will light up the boughs. To fix the tiny tapers on the tree is always a difficult task. The best way is to push large strong pins through the twigs, with the point upwards, and impale the candles on these.

If a Christmas-tree is not procurable, a pretty substitute may be made in the following way. Take strong wire, and with it form three hoops, one smaller than the other two. Put the latter inside one of the others, and suspend the third from them. Cover these hoops with evergreen, and then hang the toys and ornaments upon them. The whole thing can be suspended from a hook or from the chandelier. If from the latter, surround the gas-globes with green, and hang Chinese lanterns on the branches of the chandelier.

The old Christmas snap-dragon is well liked by children. Raisins, dates, figs, and prunes are heaped together in a china bowl or dish, and gin

or brandy is poured over them and set alight. The gas should be lowered when this is done, and the scene then presented is very pretty, the children snatching boldly for the burning fruit by the blue light of the spirit flames.

Christmas is usually kept as a family festival, and old-fashioned games in which young and old can join are the most appropriate. In fact, a too-elaborate entertainment is out of place on Christmas-day.

Christmas Fare.—Christmas has always had its own fare, almost too well known to describe. In many households the week before the twenty-fifth Sunday of Trinity is marked, according to old custom, by the making of plum-puddings. These are supposed to become mellowier if prepared some time before cooking, as the materials then become thoroughly blended. Old-fashioned housewives used to make at one Christmas-tide the pudding that was to be eaten the next; but this seems pushing the principle too far. The following is a good recipe:—

Take three-quarters of a pound of fine bread crumbs, four ounces of sifted flour, a tea-spoonful of salt, three-quarters of a pound of chopped suet, one pound each of picked raisins and currants, six ounces of fine chopped candied peel, and four ounces of moist sugar. Add as much new milk as will make these ingredients into a paste. Beat four eggs (eight if the pudding is to be very rich), and stir these thoroughly in with, if liked, a wine-glass of brandy. Put all into a well-greased basin, cover with a buttered paper, and tie tightly with a thick pudding-cloth. Then boil for seven or eight hours; and on the day it is needed boil again for two hours. This pudding should be large enough for twelve or fourteen persons.

Brandy sauce may be eaten with the Christmas pudding, or cream, or custard, as taste dictates. Thin strips of blanched almonds stuck over the pudding improve its look and taste. In some counties rice-pudding accompanies the plum-pudding. Children will regard the pudding with the more pleasure if, besides being decorated with the orthodox sprig

of holly in the middle, it comes to table surrounded by a ring of coloured wax tapers (fig. 651). These are placed on a dish-paper, to which they are made to adhere by applying strong gum, or by warming their own lower ends till they melt a little. To deposit the smoking pudding among these

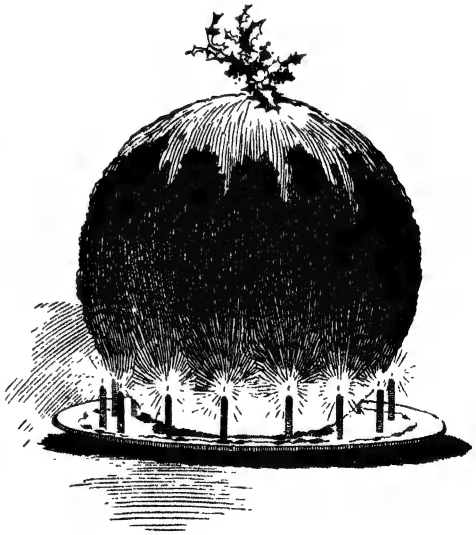


Fig. 651.—Plum-pudding surrounded by lighted Wax Candles.

requires some care; the candles, of course, should not be lighted till this is done.

Mince-meat is another Christmas dish which must be prepared some time beforehand. To make an excellent mince-meat, take one pound of beef suet chopped as fine as oatmeal, one pound of cleaned currants, the same of chopped raisins, the same of moist sugar, one and a half pound of chopped apples, and six ounces of finely-shred candied peel. Moisten with new milk and a little brandy. After the ingredients are well mixed, put them away in a jar with brandy, paper this over, and tie tightly down.

Roast turkey is pre-eminently a Christmas dish, though comparatively of modern usage. Roasted swans and peacocks were the chief items in a mediæval Christmas menu. A medium-sized turkey is best, as the very

large ones are apt to be coarse. After careful plucking, singeing, and wiping, the breast should be filled with a seasoning composed of bread crumbs, milk, butter, lemon-juice, pepper, salt, and all-spice. Enough seasoning should be made, not only to stuff the bird, but also to furnish in addition eight or ten forcemeat balls. Rub the bird with flour, and baste it well with butter all the time while it is roasting. Garnish the dish on which it is served with the forcemeat balls, and with chestnuts boiled in their skins and then peeled, and hang a chain of fried sausages round the turkey. Bread-sauce should accompany it.

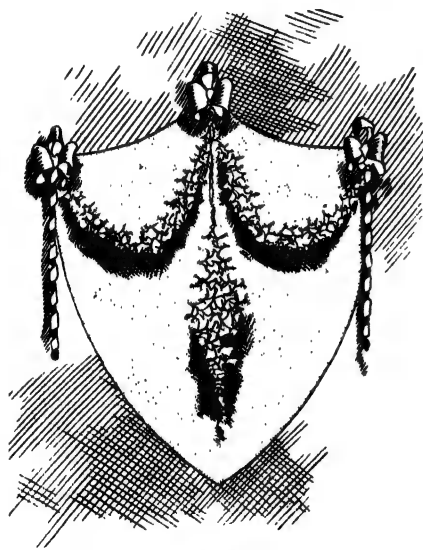


Fig. 652.

For the youngsters who look for a Christmas cake the following is a somewhat unusual recipe. Take half a pound of butter, the same of sugar, a pound of flour, a pound of currants, three ounces of candied peel, three eggs, a little nutmeg, and a quarter of a pint of warm milk. Work the butter into the flour, then add the warm milk, and then the other ingredients. Mix these, and put in a tea-spoonful of volatile salts. Beat for a quarter of an hour, and bake at once.

The foregoing is a cake too tender to bear the process of icing, but old-fashioned pound-cake is well adapted for the purpose. In this the butter, flour, sugar, plums, each weigh a pound, with as many eggs as the housewife's purse will allow. Ready-made icing, which needs only to be washed with white of egg and will then adhere to the cake, may be procured from some confectioners. To make a plain icing, take a pound of loaf-sugar, the whites of four eggs, an ounce of fine starch, and, if required, some finely-chopped almonds. Beat the eggs to a froth, reduce sugar and starch to the

finest powder, and gradually add almonds, sugar, and starch to the eggs. Beat this paste as smooth as possible, and spread it with a spoon or knife-blade over the top of the cake when it comes warm from the oven. Then replace the cake in the oven for a minute or two to dry. Crystallized fruits, pink sugar-almonds, or small figures such as Father Christmas, may be arranged on the top of the cake while the icing is still soft.

New Year.—New-year's Eve and New-year's Day are more observed in Scotland, where the latter is a public holiday, than in England. In France, gifts are more general at New Year than at Christmas, and all friends far and near keep up their acquaintance by at least an exchange of visiting-cards by post. In Germany, too, greeting-cards are reserved for New Year entirely. The festival, however, has some observance in England. New-year's Eve parties should be arranged to last till after twelve o'clock, at which hour silence reigns for a few minutes so that the clocks may be heard striking and the church bells proclaiming the birth of the new year, after which all present exchange good wishes.

Shrove Tuesday.—Shrove Tuesday, the last festival before Lent commences, is celebrated by the making of pancakes, of which the penitents shriven by the priests in former times were supposed to partake. An old superstition said that the maiden who could fry and toss a pancake without breaking it would see her future husband come past the house directly after. Maidens who wish to try their fate will find the following recipe useful:—

Make a light batter of flour, eggs, milk, and salt; beat this with a wooden spoon till freed from every knot, and add currants or apples (finely chopped) or cinnamon or almonds, according to the flavour wished. Heat some pure lard in a clean frying-pan and pour in a thin layer of the batter; fry, carefully watching to see that it browns nicely. When the under side is done, turn quickly with a knife or spoon in order that the other side may be cooked. As soon as it is fried place each pancake on a hot dish, sift white sugar over it, roll the two sides up, and keep hot till served. If snow is on the ground, a basinful of clean snow added to the batter makes it wonderfully light.

Good Friday.—On Good Friday rigid church-goers order only salt fish and egg-sauce instead of meat. More appetizing to most will be that other dish characteristic of the festival, the hot-cross buns. If anyone would like to make them at home, the following is a recipe:—

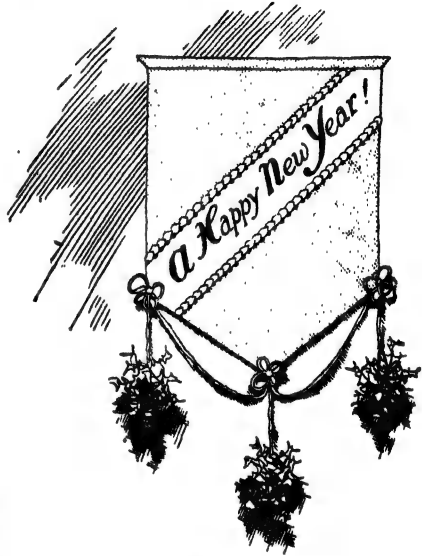


Fig. 653.

Take two pounds and a half of sifted flour, a little salt, three ounces of white sugar, three ounces of candied peel cut fine, and ten ounces of currants. Mix with the above an ounce of German yeast and three-quarters of a pound of butter or lard, and a little milk. Knead this into dough, set it to rise in a warm place, and then make it into buns. Set these to rise again before the fire for a few minutes, and then bake. The cross is formed by gashing them with a knife before baking. A little turmeric added to them gives a fine yellow hue, or saffron may be used. Wash the buns over, when baked, with a little beer or milk or white of egg to make them shiny.

Easter.—The fashion of Easter eggs comes from the Continent. The egg is appropriate at Easter-time as a symbol of waking life. German children are accustomed on Easter morning to find these eggs hidden in all sorts of queer places, and much enjoy the search for them. English children are always pleased when the custom is followed here. Plain hard-boiled eggs are used, and the shells should be coloured, or otherwise decorated. Logwood chips in the water they are boiled in make the eggs red, coffee grounds make them brown, and onion peelings yellow. The eggs can also be boiled first and painted after.

Besides eggs to be eaten at the breakfast-table, many kinds of Easter eggs are used. Cakes and jellies moulded in egg-shells are appropriate, or eggs can be made of cardboard or stiff silk and filled with sweets or tiny toys.

Hallowe'en.—Hallowe'en parties are held on the last day of October, and many mysterious rites are connected with them. Young men and maidens are the appropriate guests, for nearly all Hallowe'en customs hinge on possible matrimony. Before the glowing fire a nut is put down to roast, christened with someone's name in the thoughts of the person who places it. Then the old rhyme is repeated—

“If you love me, spit and fly;
If you hate me, lie and die”.

The behaviour of the nut decides this momentous question. Two nuts put down together represent the future of a couple. Burning steadily side by side, they denote calm and happy wedded life. But if one starts away from the other, no marriage will unite the young pair. A maiden who wishes to know something of her future spouse should eat a salt herring in three bites and drink nothing afterwards; she will then dream of the husband to come. She may also take a looking-glass and walk with it backwards to some lonely spot, then sit down in front of it, comb her hair, and eat an apple, during which process the face of her lover will, it is said, appear to her in the glass. The reader who desires to know more of Hallowe'en customs had better read Burns's poem on the subject, where all the fun and frolic appropriate to the season are faithfully described.

THE COMING OUT OF A DAUGHTER.

When a young girl leaves school a new world opens before her, a new education begins. Besides the laws of country and of religion there are others which she must learn—the laws of society, which are ever changing, ever widening their borders, though their object is always the same:—To procure for each by the assistance of all the highest possible good.

This is why, in this enlightened twentieth century, we recognize in the “woman of the world” to-day only another form of the “great lady” or “chatelaine” of the past. No one is so well qualified to undertake the social education of a daughter as a wise mother; her eyes discover what another’s would fail to see. She knows that it is advisable to prepare her daughter little by little for whatever station may be hers in life, and not to thrust her unequipped into a world of which she is as ignorant as a child.

In France, the country so justly distinguished for its perfect knowledge of the rules of politeness, or *savoir faire*, it was customary in the eighteenth century for a young girl of high birth to finish her education with the study of a book of social observances entitled, “*Civilité puerile et honnête*”. A very great lady in those days, celebrated, even in France, for her wit, talent, and beauty, declared that to it she was most indebted for the perfecting of her education. The book is still preserved.

Nevertheless a mother should not stiffen her daughter by too many worldly lessons, nor give so much importance to little things that in her fear of being found wanting a girl becomes a self-conscious creature, so alarmed in manner that she is alarming herself. Self-unconsciousness is her greatest charm, and constant fault-finding will surely rob her of it. She should be natural, and this she cannot be unless she is perfectly true. It is the very self-unconsciousness of childhood that makes a child’s every attitude so full of grace and beauty.

For this reason, in order to acquire ease, a girl should be allowed to assist at small receptions at home, where she will have many opportunities of helping her mother and gaining experience herself. If she notices a neglected guest (a hostess should never devote herself exclusively to anyone), she should draw her into conversation.

Conversation.—A voice ever “soft, gentle, and low”, is, says Shakespeare, “an excellent thing in woman”. It is also a great natural gift; but if a girl is, unfortunately, born with a harsh voice, much may be done

to render it harmonious. She should accustom herself to speak softly but distinctly.

A very necessary qualification is, to be able to listen unmoved to any solecism or absurdity. Ignorance, like poverty, is often merely an accident of birth; there is no more excuse for ridiculing the one than the other. To listen attentively is another great qualification, and enhances the talent of those who speak well. Part of the art of conversation consists in helping others to make their thoughts understood, and the sympathetic listener is enabled to say the right word at the right moment. Observe also, that it is a greater talent to listen with patience when one is bored than with pleasure when one is entertained. Though irksome, it is not without its reward, for it is the right road to attain that charm of manner which so many envy and so few possess.

A Graceful Carriage.—There are many simple ways in which a girl may acquire a graceful carriage. One is, to observe the movements of some really good actress, and afterwards practise them in her own room in front of a large mirror. One of the most graceful walkers in England confessed that she always moves to the rhythm of a song which she sings mentally as she moves along; and one can quite believe it, for hers is the poetry of motion. A well-known peeress whose daughters all have charming figures, accustomed them while still in the school-room to carry heavy books on their heads. When in India, she had noticed the upright figures of the natives, who always carry heavy baskets in this manner, and this suggested to her the novel and excellent exercise. Archery, tennis, golf, cycling, and riding all tend to improve the figure.

Good dancing lessons, fencing, and gymnastics counteract inelegancies, whereas a girl who never exercises her muscles can never walk well.

Dress.—A girl's dress is so much a matter of taste, and fashions change so often, that it would be useless to particularize. However, a few general rules on the subject may be of use.

In the morning, even in town during the season, her dress cannot be too simple. It is necessary that she should appear fresh, not smart. In the afternoon a more elaborate costume is allowable, but it depends very much on the occasion. Tailor-made gowns are almost indispensable for travelling; but in the country and at the sea-side, in hot weather, cottons, foulards, and pretty muslins may be worn. Heavy silks, satins, and brocades are entirely out of place on young girls, except in masquerade.

A girl should be as well dressed as her circumstances permit. There is no occasion to go to Bond Street or Regent Street for everything she wears; though to buy things at good shops is always an economy in the end.

A little vanity is permissible, as it shows a legitimate desire to please. "Woman's work", says Ruskin, "is first to please people." Besides, it flatters the self-love of others; and a want of care in the little things about her person may prejudice a girl for life.

Her First Ball.—To introduce a girl into society it is usual for her

parents to give either a ball or reception. If they live in London or any other town, they often hire a room or set of rooms for the purpose. Indeed, it is becoming the exception for large parties to be held at one's private house, as this involves a vast amount of trouble, to say nothing about damage to furniture. When the entertainment is given elsewhere, the suppers, dinners, and teas are all arranged by caterers at so much a head, so that the actual labour is confined to the issuing of invitations, and if the expense is slightly greater in the case of hired rooms, it can at least be accurately calculated beforehand. Still, most people are obliged to entertain their friends on a smaller scale, and in their case, no doubt, it is more convenient and less ostentatious to keep to their own houses.

Her Ball Dress.—It is usual at a ball for a girl to have her shoulders and arms uncovered, and to wear long gloves that reach above the elbow, a fan and flowers being carried in her hand. At her first ball she is generally dressed in white, but this is merely a matter of taste. There is really no need for her to have her shoulders and arms uncovered. A high bodice may be worn if she is delicate, or if she unfortunately has pointed shoulders and angular elbows.

Chaperons.—If she goes to a ball not given by her parents, it is necessary, if they cannot take her, to ask some lady to act the part of chaperon. She must accompany her chaperon into the room, and even if they do not go together to the house, she must wait in the cloak-room until the elder lady's arrival. She should strive to let her chaperon see that she is cognisant of the kindness conferred upon her; for it is not always a pleasant office, nor one that is appreciated. She should show her the same attention as she would her own mother, returning to her after each dance, or at any rate going back to her as often as possible, and in every way deferring to her wishes and conforming to her hours.

At the Ball.—In taking a girl to her first ball it is a good plan to make up a party, with as many dancing men as possible. At most balls they are in the minority; and it is painful to see a young girl, or indeed any girl, condemned to remain a wallflower. It is a triumph for her to have plenty of partners, and to be able to declare that she has not sat out a single dance; but this is rarely the lot of any, unless she is in some way distinguished by position, beauty, or excellence in dancing.

Some girls say "Thank you" when a gentleman asks them to dance, but this is quite unnecessary, as a lady confers a favour when she accepts a gentleman as her partner. That the converse is the opinion, too many young men unfortunately show by their manner of asking for a dance.

A girl must not dance too often with the same man, however much she may prefer him as a partner. Should she refuse to dance she must do so pleasantly: "Thank you, but I'm engaged for this dance", or "Thank you, but I'm tired and am not going to dance this time". If she refuses without the plea of a previous engagement, she must not dance with anyone else, but remain seated during the valse or quadrille which she has refused. Should the gentleman with whom she has refused to dance ask her again to

do so later in the evening, she must not refuse a second time unless she has really some serious reason. She must be very careful not to confuse her engagements, and thoughtlessly accept two partners for the same dance. Should, however, such an incident occur, she must endeavour to extricate herself as gracefully as possible. To avoid giving offence, she may offer to deprive herself of the pleasure of dancing with either of them. In this case one of them is certain to withdraw his claim, but she must carefully avoid showing to either the slightest preference.

When, after a dance, her partner has conducted her to her place, he and she bow slightly to each other, and he at once leaves her. No man accustomed to the usages of good society would linger, as it prevents other men from approaching who may wish to ask her to dance. Some girls sit out dances with their partners instead of dancing them. This is considered incorrect, but in some cases is excusable.

Coming-of-Age Ceremonies.—In well-to-do circles where presentation at Court does not form part of life's programme, the coming out of a daughter is usually celebrated by giving a dance and inviting to it the family's entire circle of acquaintance. She may know them all, but the idea is to introduce her to them. They are then supposed to include her in invitations, which they would not have done in the girl's nursery days.

The introduction of a son to society is usually more formal. Large landowners have a coming-of-age celebration on their estates. The well-to-do middle classes give a ball or large dinner party. The young man is given his choice as to what form the invitation may take. His mother leaves his card with her own when making calls, and her friends include him in their invitations.

PRESENTATION AT COURT.

If it is decided that a girl should be presented at Court, the question arises—by whom? The natural person is her mother, who, if she has herself been presented since her marriage, has only to write to the Lord Chamberlain at his office, St. James's Palace, saying that she proposes to attend a Court on a special date and to present her daughter. In due course she receives presentation cards, two for herself and two for her daughter. If, however, the list for that day happens to be full, the names are put down for the next or a later. Should the mother not have been presented on her marriage, she can be presented first by some friend, and then herself present her daughter. If the services of a friend at Court, or of one who has the "entrée", can be secured, it will be very much pleasanter for the débutante, as there will then be no delay in entering the Palace, which in certain weather conditions is extremely trying.

However well a girl dances, or her mother imagines she dances, and however well in consequence she may be supposed to be initiated into the mysteries of what is required when she enters the Royal presence, it is

absolutely necessary for her to have a few presentation lessons beforehand from some competent master or mistress. The awkwardness of the average English girl in getting through her curtsy is proverbial.

Court Dress.—Court dress is the most beautiful dress in the world, and rightly so, for the wearer is going to meet her Sovereign. The shoulders and arms must be uncovered, unless an order is obtained from the Lord Chamberlain permitting her to wear a less décolleté style; but this is rarely applied for, no one wishing to appear singular.

To obtain a Court dress perfect in every detail, it should be entrusted to some good firm who make the subject a study; but where circumstances do not allow of this, some clever dressmaker may be found to carry out quite nicely any ideas suggested. In choosing a dress for a presentation, white is requisite, and the train is usually of a different material from that of the dress itself. Formerly trains were worn depending from the waist, but this fashion was neither so becoming nor so graceful as the train fastened to the shoulder, and has not, except in a few instances, been revived.

As a sketch of a Court gown suitable for a young *débutante*, one might choose a skirt of white satin, ornamented with *bouillonnés* of white tulle and bows of white satin ribbon, or bunches of white roses or tufts of heather. The bodice should be made fashionably trimmed with either tulle or silk muslin put on full, with a bunch of the same flowers on one shoulder. If preferred, it may be of the same material as the train, but the other is more simple. The train must be lined with either plain or glacé silk, and the edge finished with a rucheing of the same; while on one side, well up in the corner, festoons of white tulle or chiffonette, with clusters of white roses or heather fastened with white satin ribbon, will give an elegant finish. Unless the train be fully three yards in length there is not sufficient material to convert it into a dinner-gown, which is the ultimate use of a Court train. Some of the most beautiful trains are made of chiffon, gauze, or real lace, lightly lined with soft silk or chiffon.

Plumes must be worn. The arrangement of them and of the hair should be done either by a good hair-dresser or maid accustomed to Court hair-dressing. And this is of so much importance, that someone has wittily said of Society ladies: "By their heads shall ye know them".

Going to Court.—If the *débutante's* parents have no carriage of their own, their best plan is to hire from a good livery stable a one-horse brougham with coachman and footman, the inclusive charge for which should not exceed two pounds. Care must be taken not to crush the train; it should be carefully folded, or rather gathered together, and kept in front.

On arrival at the palace one of the cards is given up in the corridor; the other is retained to be given to the Lord Chamberlain. With her train on her arm, the *débutante*, with her mother or friend, proceeds to the Waiting Room. The rooms in which the ladies wait are the "Dining

Room", the "Blue Drawing Room", and the "Yellow Drawing Room". Those who have the "entrée" go straight into the "Blue" and "Yellow" Drawing Rooms; the others wait in any of the other rooms mentioned till their turn comes. To reach the "Ball Room" they have to cross the "Picture Gallery", and as they do so their trains are put down.

In the Ball Room.—The Groom "in waiting" receives the cards and hands them to the Lord "in waiting", who passes them on to the Vice-Chamberlain. Finally they reach the Lord Chamberlain, who stands at the right hand of the King, and he reads out the names. This is the critical moment. Every eye in the Royal Circle, as well as in the *corps diplomatique* (critical gentlemen from every Court in Europe), is fixed on the débutante as she advances to pay her homage to her Sovereign.

One of the Gentlemen Ushers, who stand in a group opposite the King, places the train on the débutante's arm after she has passed by, and she backs out as gracefully as may be; not a difficult thing to do, as attention is already fixed on the next comer. The ordeal is over, and the débutante and her chaperon go to supper in one of the rooms set apart for the Royal hospitality.

A WEDDING.

I. IN ENGLAND.

Marriage in England is legally merely a civil contract entered into by a man and woman by means of certain prescribed forms. This contract is held to be valid whatever misrepresentations may have been made by either party with regard to social or financial position or future prospects. It cannot be dissolved at the will and pleasure of either or both parties, but only in consequence of certain kinds of misconduct.

Marriage before the Registrar.—A marriage may be contracted either with or without a religious ceremony. If without, it must take place in the office of the civil registrar within the canonical hours and in the presence of witnesses, the persons exchanging a declaration that they take each other for man and wife. It is necessary to give a clear twenty-one days' notice to the registrar of the district in which the parties have dwelt for seven days, or, if they are in different districts, to the registrars of both. The fees payable are 5s. to the registrar and 2s. to his superintendent.

The religious ceremony, when this is used, must take place between 8 a.m. and 3 p.m., either in the church of the ecclesiastical parish or district or in a chapel duly licensed and registered. Formerly the attendance of the registrar was necessary when the marriage was not a Church of England one, but by an Act which came into force in April, 1899, his presence is no longer essential, provided the minister is willing to keep the books and perform the duties of registration.

Marriage by Banns.—The other methods of marriage are by banns, by ordinary license, or by special license. The first is the least expensive way. Prior to the marriage the banns must be published in the respective parish churches of both bride and bridegroom on three consecutive Sundays, and one of the contracting parties must reside for at least fifteen days in the parish of the church in which the ceremony is to take place. The ceremony must be performed within three months of the final publication; otherwise the banns lapse.

Marriage by License.—An ordinary license can be obtained by personal application at the registry office of the bishop of the diocese, or of his surrogate. It fixes the time and place for the ceremony, which must be performed in the parish church of the district in which one of the parties has resided for fifteen days prior to such issue. The fee, inclusive of all charges, is £2, 2s. But when the license is obtained in the country through

a clerical surrogate the cost varies from £2, 12s. 6d. to £3, 3s. according to the diocese.

Marriage by Special License.—A special license costs £30, but with it the parties may be married when and where they please. Though applied for at the Faculty Office it is obtained from the Archbishop of Canterbury, who exercises the right of withholding it if the circumstances of the case, which must be stated, do not meet with his approval. The ceremony performed must be that of the Church of England.

Mixed Marriages.—When the contracting parties are of different creeds considerable difficulties occur with respect to the religious ceremony and the future religious instruction of the possible issue of the union.

In the Roman Catholic Church mixed marriages—that is, marriages when one party is a Roman Catholic and the other is not—are regarded with disfavour and require a dispensation, which is seldom given unless the non-Catholic agrees and declares in writing:—(1) That all the children that may be born of the marriage shall be baptized and brought up in the Catholic faith; (2) that the Catholic party shall have full liberty for the practice of the Catholic religion; (3) that the Catholic party may endeavour, especially by prayer and the example of a good life, to convert the other to the Catholic faith; and (4) that no religious ceremony shall take place elsewhere than in the Catholic Church. It is, indeed, sometimes agreed between the parties themselves that the boys shall be brought up in the faith of the father and the girls in that of the mother, but the religious ceremony must in this case take place elsewhere than in a Catholic Church.

The Greek Church is equally stringent in its demands; but the promise is exacted, not in writing, but orally, during the celebration of the service and immediately preceding the benediction. Without a distinct understanding that this promise will be made and kept, the Archimandrite refuses to perform the religious rite; and the offending member of the “orthodox” church is considered outside its pale if the marriage takes place elsewhere.

Among the Jews, a member of their community who intermarried with a Christian was at one time lamented as one dead, a week of mourning being observed by the relatives. Even at the present day a mixed marriage is not recognized, and in all religious matters the parties are treated as if the tie between them were irregular. The children of a Jewish mother are considered Jews even if the father is a Christian, but no Jew can be born of a Christian mother. By a special Act a Jewish marriage may take place in a room without a special license, but a civil registrar must be present as one of the witnesses.

Marriage with a Foreigner.—When the contracting parties are of different nationalities, the resident foreign Consul should be applied to for information. Marriage between Europeans and natives of the East cannot be too strongly deprecated. An Englishwoman forming such an alliance is not visited by the wives of Europeans resident in the East, and is regarded as quite outside the pale of any society.

II. IN SCOTLAND.

Marriages in Scotland may be either regular or irregular. It is illegal for a minister to celebrate an irregular marriage; but both kinds of marriage are equally valid. Marriage in Scotland is really constituted by the consent *de præsenti* of the parties to take each other as husband and wife.

Regular Marriage.—A regular marriage is one celebrated by a minister in presence of at least two witnesses after proclamation of banns or publication of a notice by the Registrar. The banns must be published in the respective parish churches of both bride and bridegroom, and in strict law the proclamation should be made in every case on three consecutive Sundays. In practice, however, proclamation on two Sundays, or one only, is sufficient.

Instead of having banns proclaimed, each of the parties may give notice of the intended marriage to the Registrar of the parish or district in which he or she has resided for not less than fifteen days previous to the notice. The fee to be paid when the notice is given is 1s. 6d. The Registrar, after publishing the notice for seven days in the statutory manner, will give a certificate of due publication of notice of marriage on receipt of another fee of one shilling. This certificate is equivalent to a certificate of proclamation of banns.

The officiating minister may belong to any church. A Jewish rabbi, or the person appointed by the Quakers to celebrate marriages, may perform the ceremony among his own people. The marriage may be celebrated in any place and at any hour. There are no canonical hours to be observed in Scotland. A Presbyterian marriage is generally celebrated in the house of the bride's parents, but marriages in church are by no means uncommon now among the well-to-do classes, and seem to be growing commoner. Hotels are frequently used for the purpose where the number of guests is considerable.

The certificate of proclamation of banns, which will be obtained from the Session-clerk, or the Registrar's certificate of publication of notice, must be handed to the minister before the ceremony. He is liable to a penalty if he performs the ceremony without having had such a certificate produced to him.

Registration of Regular Marriage.—The marriage must be registered within three days under a penalty of £10. A schedule must be procured from the Registrar of the parish or district within which the marriage is to take place. It will be filled in by the Registrar, and must be produced to the minister at the marriage. After the marriage the schedule must be signed by the minister, the husband and wife, and two witnesses. It will then be handed to the parties, and must be delivered or posted to the Registrar within three days.

Irregular Marriages.—An irregular marriage may be constituted by the parties declaring that they take each other there and then as husband

and wife. The mere interchange of consent constitutes marriage in Scotland, if the parties are capable of marriage and there is no legal impediment between them. One of the parties must at the date of the declaration or consent to marriage have had his or her usual place of residence within Scotland, or have lived in Scotland for twenty-one days before the marriage. Witnesses are not essential to the validity of the marriage, but if there has been no writing by the parties, it will usually be impossible to prove the marriage unless witnesses were present when the declaration was made.

In certain circumstances an irregular marriage may be constituted without express declaration or consent. The actings of the parties in some cases may afford ground for asking the court to declare that they are married.

Registration of Irregular Marriage.—Persons who have contracted an irregular marriage may obtain authority to have it registered by applying to the sheriff within three months from the date of the marriage. On its being proved that the marriage took place, and that one of the parties had at the time his or her usual residence in Scotland, or had lived there for twenty-one days prior to it, the sheriff will grant a warrant to the Registrar to record the marriage. The Registrar's fee for an extract certificate of the marriage is 5s. This form of procedure is what is commonly known as "marriage before the sheriff"—a quite inaccurate description of the proceedings.

PREPARATIONS FOR A WEDDING.

Preliminary Arrangements.—If any relatives or friends of the bride and bridegroom are in Holy Orders they are usually invited to officiate or assist at the marriage. The father of the bride should write to the vicar of the parish, inquiring if the wedding may take place in his church, and naming the day and hour. If the vicar is not to perform the service it is courteous to desire his assistance. He should be informed whether the service is to be fully choral or otherwise. A card of invitation to the luncheon or reception should be sent to him, whether he is a personal friend of either family or not.

The bride's father, having previously ascertained the income and resources of the bridegroom, should require him to make an adequate settlement on his future wife which cannot be touched by creditors in the event of business failure or financial misfortune of any kind. Failing this, the bridegroom should insure his life, the policy being made out in her favour. He should also draw up a will making proper provision for her. This document is generally signed in the vestry at the conclusion of the ceremony. If signed before, it would be invalidated by the marriage.

The bride's dowry, or any property or money she may subsequently inherit, should be settled upon herself and the issue of the marriage, in such a manner that the capital cannot be spent, or in any way forestalled by

herself or her husband to the injury of her own prospects or those of her children. For fuller information about these legal matters see "The Law of Husband and Wife", Vol. IV.

Wedding Invitations.—The wedding luncheon or reception should be given by the bride's parents or by her nearest relative. The invitations should be issued in the names of both host and hostess about three weeks before the wedding-day. They should be printed in silver on note-paper or cards. Specimens may be seen at any fancy stationer's, the usual cost being from £1 to £3 per hundred. For the wording of the invitation see Vol. V, p. 8.

If a reception is held it is not necessary to state the fact. Guests with whom the bride and bridegroom have not a visiting acquaintance may be asked to the church only.

If the wedding takes place in the country, the most suitable trains for arrival and departure are printed on the back of the card; and arrangements may be made with the railway company to attach saloon carriages to those trains for the convenience of guests. Carriages should be in readiness to convey the guests to the church, or to the house first, where refreshments (cold) should be served, unless those after the wedding are to be fairly substantial. Guests from the neighbourhood provide their own carriages. The charge for a brougham and pair averages 15*s.* for two hours, and for a brougham and one horse 7*s.* 6*d.* If the coachmen wear top-boots, white gloves, and favours, an additional charge is usually made, while on such occasions "tips" can hardly be avoided. The bridegroom provides only the carriage which conveys his bride and himself from the church to the house, and subsequently from the house to the railway-station. After the luncheon or reception, however, the bride's father frequently places his own carriage at the disposal of the newly-married pair.

Bridesmaids and Pages.—Special invitations are written or given by the bride to her most intimate unmarried friends whom she desires to be her bridesmaids. She arranges that they shall be suitably attired in costumes chosen by herself, with due consideration to any express desire on their part. They should, however, be chary of suggesting alterations, and should be disposed rather to fall in with her wishes. A French fashion, rarely followed in this country, permits each bridesmaid to choose the style and trimmings of her own gown, only the material of all being alike, though the various colours must be in harmony. This is an excellent plan when all the dresses are not supplied by the same *modiste*. The bridesmaids may vary in number from one to ten; they may be all young unmarried ladies or little girls only, or both. If the bride has any unmarried sisters, she should choose the eldest as her principal bridesmaid; but if she has none, she has the option of choosing a great friend in preference to her future sister-in-law.

She is often attended by two pages who carry her train, but only if her dress is very magnificent. Long loops of satin ribbon may be attached beneath the train, so that the pages may not raise it too high from the

ground. Their most usual costume is of the period of Elizabeth, Charles I., or Charles II. Reliable engravings should be consulted in order that the details may be perfectly correct.

The Bride's Dress.—The conventional wedding dress is often replaced by a travelling gown, preferably tailor-made. This is desirable when the wedding is a very quiet one, when the bride is no longer in her first youth, and certainly when she is a widow. A widow has no bridesmaids, though a married friend may perform the offices of bridesmaid-in-chief for her. It is usual for a widow to remove her first wedding-ring.

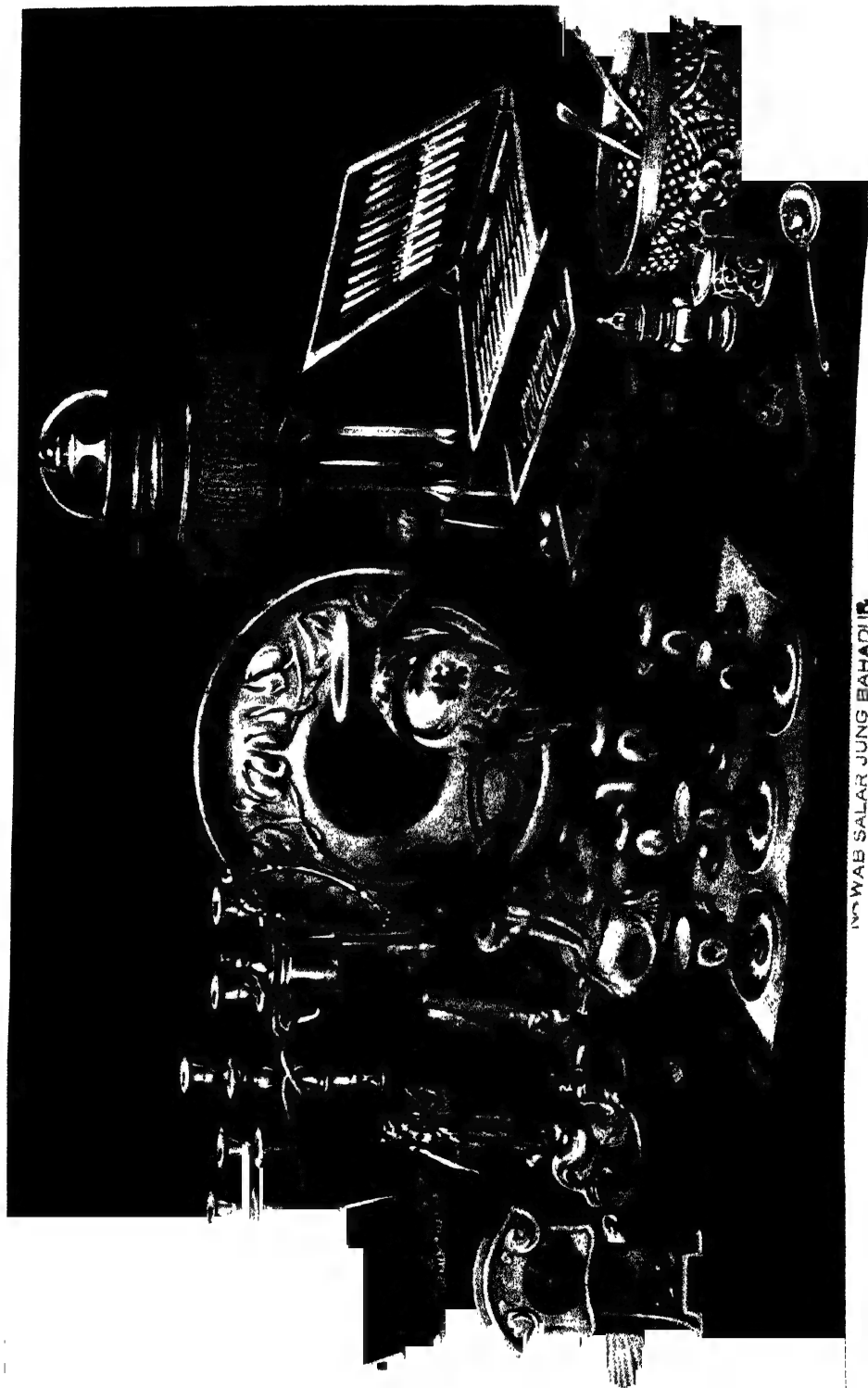
Preparation in the House.—At a wedding in the country, and also in town if space permits, the erection of a marquee provides a desirable addition to the accommodation afforded by a moderate-sized house. Here the wedding luncheon or reception may be given. House and tent should be connected by a covered way. A marquee, awnings, and red cloth for both house and church would be supplied by the firm entrusted with the order for refreshments. The price of hire varies from £5 to £20, according as the accommodation is required for 100 to 180 guests at a reception, or for 40 to 90 at luncheon. Flooring and a drugget increase the expense. Awnings average £1, 1s. each, with 5s. additional for walling. At wedding receptions in the country a band is a great advantage. The fees for each musician average from £1, 1s. to £1, 10s., railway and other expenses not included.

In the house all hanging lamps should be hidden by flowers and foliage. A large bell of white blossoms or two smaller ones, suspended from an archway by silken cords, is an effective and appropriate decoration. The bride and bridegroom stand under it to receive the congratulations of their friends.

A bride whose home is in the country frequently prefers to be married from a hotel in some large town. The anxiety and trouble are thereby reduced to a minimum, and friends residing at a distance are more likely to put in an appearance at a town wedding. Everyone invited to a wedding, whether able to be present at it or not, should send a gift to the bride.

PRESENTS.

The Donors.—In the case of a short engagement presents are often sent before the invitations are issued. They should certainly reach the bride within a week of the wedding-day, to enable her to acknowledge each gift by a note of thanks before her final preparations engage all her time and attention. The value of the present should be in accordance with the means of the donor, or with the degree of relationship or intimacy with the bride or bridegroom. Only a relative or very old friend should send a cheque. The gift should be accompanied by a visiting-card (which is attached to it when the presents are exhibited), and by a letter conveying the donor's congratulations and good wishes. Friends of the bridegroom who are not



IV. WAB SALAR JUNG BAHADIR

acquainted with the bride send their presents to him, and he should forward them to the bride's home.

Display of the Presents.—If the bride has a very large circle of friends, or if her marriage is to be solemnized in India or some colony where her *fiancé* awaits her, an "At Home" is given by the bride's mother, when the presents are on view as well as on the wedding-day. A room is invariably set apart, with tables of various shapes and sizes ranged round, on which the gifts are displayed. Silver should be placed, if possible, against a dark background of plush or velvet. Long sprays of smilax, ivy, or virginian creeper, according to the season, should be arranged amongst the gifts; if there are any vases among the presents, they should be filled with choice flowers and disposed here and there. An ornamental basket of flowers, the handle tied with ribbon, with trails of smilax radiating towards the four corners of the table, makes a charming centre ornament.

If policemen are engaged to keep order at the church and house on the wedding-day, they usually receive 2s. 6d. each.

Presents from the Bridegroom.—The bridegroom must provide the wedding-ring, the bridal bouquet, and the bouquets for the bridesmaids, to whom he also presents some souvenir, which usually takes the form of jewelled lace-pins, bangles, or brooches. The form of the bouquets varies with the decrees of fashion, and occasionally baskets of flowers, flower muffs, and even "lucky slippers" are substituted. These innovations are most suitable when the bridesmaids are little children. The bridegroom generally presents a bouquet to the bride's mother. It is a mark of courtesy and respect. Patterns of the different materials and trimmings of the gowns should be supplied to the florist.

THE CEREMONY.

Accommodation of Guests.—When the number of guests likely to be present at the ceremony has been ascertained, a sufficient number of pews should be railed off for their accommodation, the first two or three rows being reserved for immediate relatives. Two of the groomsmen act as stewards and assist in seating the guests, who should arrive some time before the bride. Her relatives and friends sit on the left, and those of the bridegroom on the right side of the church. Guests do not carry prayer-books. Copies of the hymns to be sung during the service are printed on small leaflets and distributed in the pews. The name of the church, the date, and the initials of the bride and bridegroom are inscribed on them.

Floral Decorations.—For the floral decorations an estimate should be procured from a florist. The altar vases may be filled with fresh white flowers, and the chancel steps decorated with large palms and ferns in pots, which may be hired.

The Celebration.—The bridegroom, accompanied by the best man, should enter the church by way of the vestry, and await the bride at the foot of the chancel steps, on the right-hand side. His best man, who is usually a bachelor, stands at his right a little in the rear.

The bridesmaids should form in a line on either side of the church porch or just inside the doorway, and be ready to follow the bride immediately she has passed between them. If she has sisters, they drive to church with her mother, who should take the arm of her son or some near relative in passing up the nave. Occasionally the bride is accompanied to the church by her mother and received at the church door by her father or guardian. She takes his right arm, and after slowly passing up the nave to the chancel, places herself on the left of the bridegroom. Her father stands a little to the rear, on her left side, to give her away. In Anglican Churches the bride is preceded up the nave by the choir and clergy, and sometimes, though not often, by her bridesmaids, she herself coming last of all in the procession. In this case the bridesmaids must pause and divide into two lines at the top of the aisle to allow her to pass between them, and must then close up again in rank behind her. When the service begins, the bride hands first her bouquet, and then her left glove, as soon as she has removed it, to her head bridesmaid, who should move forward to the right of the bride to receive them. The first portion of the service usually takes place outside the chancel, the bride and bridegroom afterwards advancing to the altar to receive the exhortation, either unattended or followed by the bridesmaids and best man.

Signing the Register.—At the conclusion of the ceremony the officiating clergyman leads the way to the vestry. He is followed by the bride and bridegroom, their parents, the best man and head bridesmaid, and the most important of the relatives and friends. Any or all of them may sign the register.

Meantime, wedding favours, which should consist of natural flowers, may be distributed amongst the guests in the church by the pages and little girl bridesmaids.

Departure from the Church.—The register having been signed, the bride should take her husband's right arm and pass down the nave. Her bridesmaids follow, and after them the parents and principal guests of the newly-married pair, walking in couples. It is not now usual for the bride to pause and shake hands with any of her friends, but she may occasionally do so if she knows that they are unable to attend the subsequent reception.

When the bride and bridegroom have driven off, the bride's mother follows them as quickly as possible in order that she may be able to receive the guests. She should be accompanied by the father of the bridegroom, and the bride's father should give his arm to the bridegroom's mother. The bridesmaids follow in carriages next in order, and then all the other guests without any regard to precedence.

Fees.—The fees paid by the bridegroom are discharged on his behalf

by the best man either immediately before or after the ceremony. The officiating clergyman may receive from £1, 1s. to £25, according to the means and position of the bridegroom; the vergers, from 5s. to 10s.; and the bell-ringer, 10s. The bride's father pays the choir, the organist, and the organ-blower, amounting in all to about £2, 2s.

The Trousseau.—The modern trousseau includes comparatively few made-up dresses, the most detailed attention being given to all the etceteras, particularly underwear. The dresses are usually just the number required for present wear, without that provision for the future which used to characterize the bridal outfit. In many cases the gowns were out of fashion before they had been all worn, a contingency which is averted by the new arrangement of having some unmade dress-lengths included in the trousseau, which can be made up as they are required. A model outfit contains one dress of every kind, and a dress-length for another tea-gown and jacket, dressing-gown and jacket, a dozen blouses, a dozen pairs of gloves, the same quantity of shoes, six hats, a restaurant coat, a travelling coat, an opera cloak, and a fur coat, besides three dozen of everything for underwear for summer, and the same for winter, and six dozen handkerchiefs.

The following estimates are for trousseaux at £100 and £50 respectively. The prices are taken from those of the leading London drapery firms.

£100 TROUSSEAU

[illegible]

	£	s.	d.
Warm Jaeger dressing-jacket	1	1	0
Muslin dressing-gown or kimono	1	10	0
„ dressing-jacket	0	12	6
6 nightgowns at 6s. 6d.	1	19	0
4 „ at 10s. 6d.	2	2	0
4 Viyella nightgowns at 15s. 6d.	3	2	0
6 camisoles at 3s. 6d.	1	1	0
3 „ at 7s. 6d.	1	2	6
2 white petticoats at 10s. 6d.	1	1	0
1 moirette petticoat	0	18	6
1 silk petticoat	1	5	0
1 lace evening petticoat	0	14	11
3 flannel petticoats at 5s. 6d.	0	16	6
4 pairs warm knickers at 4s. 6d.	0	18	0
6 pairs summer „ at 3s. 11d.	1	3	6
Corset	1	10	0
Evening corset	0	10	6
3 summer combinations or chemises at 3s. 6d.	0	10	6
3 winter „ „ „ at 4s. 11d.	0	14	9
2 Shetland spencers at 2s. 6d.	0	5	0
1 dozen handkerchiefs at 14s. 6d.	0	14	6
½-dozen „ at 21s.	0	10	6
Umbrella	0	19	6
Sunshade	0	7	6
Trunk 25s. and hatbox 14s. 6d.	1	19	6
Belts, &c.	0	6	0
		9	8

£50 TROUSSEAU

	£	s.	d.
Wedding-dress	4	10	0
Tulle veil	0	10	6
Shoes, white kid	0	2	11
1 pair long gloves, white	0	5	11
Light afternoon and evening cloak	2	12	6
1 black half-high dress	3	13	6
1 afternoon dress	3	13	6
1 coat and skirt	3	3	0
1 tweed coat (ready-made) for travelling	1	5	0
1 blouse suit for mornings	1	10	0
2 flannel blouses at 4s. 6d.	0	9	0
2 silk „ at 4s. 6d.	0	9	0
1 high black blouse to go with black evening dress	0	10	6
1 morning hat	0	10	6
1 afternoon hat	1	1	0
2 pairs boots or shoes at 10s. 6d.	1	1	0
1 pair slippers	0	5	6
1 pair „ (evening)	0	7	6
1 extra pair white kid slippers	0	2	11
(or this and wedding pair replaced by 1 pair white satin at 5s. 11d.)			
4 pairs short gloves	0	10	6
1 extra pair long white gloves	0	5	11
1 warm Pyrenean dressing-gown	0	18	6

	£	s.	d.
1 warm Pyrenean dressing-jacket	0	8	6
1 cotton dressing-gown or printed kimono	0	10	6
1 cotton bed-jacket	0	5	11
6 nightgowns at 5s. 6d.	1	13	0
2 „ at 10s. 6d.	1	1	0
4 nightgowns (Viyella) at 14s. 6d.	2	18	0
4 camisoles at 2s. 6d.	0	10	0
2 „ at 4s. 6d.	0	9	0
2 white embroidered petticoats at 4s. 6d.	0	9	0
1 moirette petticoat at 14s. 6d. ..	0	14	6
1 lace petticoat for evening	0	10	6
2 flannel petticoats at 3s. 6d.	0	7	0
3 pairs flannel knickers at 4s. 6d.	0	13	6
4 pairs longcloth knickers at 2s. 11d. ..	0	11	8
Corset	1	1	0
Evening corset	0	10	6
3 Indian gauze combinations or 3 chemises at 2s. 11d.	0	8	9
3 winter combinations at 4s. 11d., or 3 chemises	0	14	9
2 Shetland spencers at 2s. 6d.	0	5	0
1 dozen handkerchiefs	0	14	6
$\frac{1}{2}$ -dozen „ at 21s. per dozen:	0	10	6
	£43	5	9

Suggestions for the Margin Left

Laces, belts, &c.	0	9	3
Trunk, 25s., hatbox, 14s. 6d. .	1	19	6
Extra hat	0	18	6
Umbrella	0	12	0
Dress or dress-lengths and blouses	2	15	0
	£50	0	0

Wedding Reception.—A wedding reception is the accepted form of entertainment. It is served at a buffet or buffets. There is usually champagne for drinking the bride's health. The following menu will serve as a specimen:—

Tea, Coffee, and Iced Coffee.		
Brown and White Bread and Butter.		
Balmoral Cake.	Madeira Cake.	
Queen Cake.	Sponge Fingers.	
Wine Biscuits.	Parisian Biscuits.	
Fancy Pastry.		
Meringues.	Macaroons.	
Sandwiches.		
Foie Gras.	Ham.	Tongue.
Egg and Cress.	Savoury.	
Ices.		
Strawberry Cream.	Lemon Water.	
Pink and White Wafers.		
Champagne Cup.	Claret Cup.	
Lemonade.		

Departure of the Bride and Bridegroom.—The bride need only be present for about half an hour at a wedding reception. She cuts the wedding-cake on entering the dining-room, after having received the congratulations of her friends in the drawing-room, bestows a sprig from her bouquet on her greatest friends, and finally presents it to her head bridesmaid. Her bridesmaids should on every occasion line the hall or porch to bid her farewell. Her luggage, with the exception of her dressing-case, should on no account pass through the hall amongst the guests. It should be taken, together with the bridegroom's, to the station on the morning of the wedding-day.

The head bridesmaid may throw a white satin slipper for "luck" after the carriage, but it is now considered bad form to shower rice and confetti on a newly-married pair.

Wedding-cake and Cards.—Cake and cards are not always sent. Cards may be sent without cake, and the latter merely to relatives and friends who could not be present at the wedding.

Wedding Notices.—Notices of the wedding, which should be forwarded by the best man as soon as possible to the daily papers selected, should take the following form:—

CHANCELLOR—BIDDULPH. On the 7th inst., at Christ Church, Enfield, by the Rev. W. Ramsay, vicar of Buckworth, assisted by the Rev. Francis Cole, Walter Henry, son of Frederick Chancellor, Esq., of River Hall, Kent, to Margaret, daughter of George Biddulph, Esq., of the Grange House, Enfield.

The notice should be accompanied by a note from a responsible person, and a cheque or postal order.

Printed forms previously obtained by the bride from the offices of the society papers should be filled up and returned not later than one clear day after the wedding, together with photographs of the bride and bridegroom. No charge is made for the insertion, but it is usual to order a certain number of copies when the form is sent back.

INDEX.

A

- Abnormal and defective children**, schools for, v, 220.
- Accident insurance**, iv, 24-5. (See Insurance.)
- Accidents to property**, i, 50; fire, ii, 56; lamp, ii, 71; to servants, ii, 91-4; insurance against, ii, 95-7; from poison, vi, 50; due to electricity, vi, 87.
- Accountants**, training information, etc., vi, 2; a career for women, i, 28.
- Accounts, household**: methods of keeping, cash *v.* credit, weekly and monthly payments, checking and filing of bills, estimates of expenditure, iv, 40-5.
- Acetylene gas**, use and cost of, ii, 75-6.
- Acne** ("blackheads"), treatment of, iv, 51; vi, 63.
- Action of maills and duties for recovery of rent**, i, 53.
- Actors**, information as to training, etc., vi, 2.
- Actuaries**, information as to training, etc., vi, 3.
- Adaptation of garments**, v, 199-201.
- Adjuncts**, usual, of different dishes, for meat, poultry, vegetables, and fish, iii, 120-1.
- Admiralty dockyard posts**, information regarding, vi, 11.
- Advertisements in newspapers for servants**, ii, 79-80.
- Advocates**, information regarding, vi, 16.
- Afternoon calls**, etiquette of, v, 5; "at homes" and teas—arrangements, menu, refreshments, etc., v, 28-9; invitations, v, 7, 9.
- Agreements and leases**, i, 21; stamping of, i, 48.
- Agriculture**, training and degrees in, v, 244; vi, 3.
- Ailments of poultry**, iii, 202; of dogs, v, 91-8; of cats, v, 101-3; of rabbits, v, 111; of bees, v, 116; of babies, v, 174-7; remedies for simple ailments, vi, 61-73. (See under special names.)
- Air-gas**, as an illuminant, ii, 76.
- Airing and arranging of bedrooms**, ii, 125; of linen, iii, 138.
- Alabaster figures**, how cleaned, ii, 151.
- Albums in food**, ii, 208.
- Alcohol**, dietetic value of, vi, 46; treatment for poisoning, vi, 76.
- Aliment**, actions of, iv, 21.
- All-fours**, instructions for playing, vi, 192.
- Allowances for servants**, ii, 112.
- Almond cakes**, iii, 23; soup, iii, 31; tartlets, iii, 75; lotion for the complexion, iv, 48; paste for the hands, iv, 1.
- Alpaca**, description and price, iv, 70.
- Aluminium cooking utensils**, i, 179; pans, ii, 170.
- Amateur and professional decorating compared**, i, 67-70.
- American clock for kitchen**, i, 177; spring-rollers for blinds, i, 229; organ, study of, prices, &c., vi, 156.
- Ammonia for darkening wood**, ii, 15; for the hair, iv, 63; use of spirits of, iv, 88.
- Amusements**, at garden parties, v, 34; children's, v, 202-14. (See Children's Amusements and Games.)
- Anæmia**, treatment of, vi, 63.
- Anaglypta paper for ceilings**, friezes, etc., i, 81; frieze design, i, 82.
- Analysts**, information as to training, prospects, etc., vi, 4.
- Anatomical relations of the human body**, iv, 78.
- Anchovy paste**, ii, 193; sauce, iii, 36; toasts, iii, 84; tartines, iii, 118.
- Anconas** (poultry), iii, 178.
- Andalusians** (poultry), iii, 179.
- Angling**, general information, vi, 214-5.
- Animal food**, proportion of water in, ii, 206.
- Animals**, care of. (See Cats, Dogs, Birds, etc.)
- Animation, suspended**, methods of restoring, vi, 86-8.
- Aniseed cordial**, ii, 230.
- Ankle, fractured**, treatment, vi, 84.
- Annals**, hardy and half-hardy, iii, 220; select list, iii, 228.
- Annuities**, purchase of, iv, 24-5.
- Answering the bell**, ii, 130; letters, iv, 212.
- Antiseptics**, use of, in preserving food, ii, 194-6.
- Apoplexy**, treatment of, vi, 85.
- Apple jelly**, ii, 224; cream, iii, 80; iced cream, iii, 82; soufflé, iii, 83; water, vi, 109.
- Apples**, dessert and culinary, good varieties, iii, 219.
- Appliances, garden**, iii, 206; library, iv, 208; surgical, vi, 51.
- Appliqué embroidery**, materials, onlaid and inlaid, specimens and designs, iv, 161-5; examples, iv, 172.
- Apricot jam**, ii, 224; wine, ii, 234; shape, iii, 73; cream, iii, 76; trifle
- (*savarin d'abricots*), iii, 78; eggs, iii, 82.
- Arbitration for servants' compensation claims**, ii, 93.
- Archery**, instructions and requisites for game, vi, 207.
- Arches, wire**, for gardens, iii, 229.
- Architects**, information as to training, prospects, etc., vi, 4.
- Archway curtains** (illustration), i, 225.
- "Ardent" lamp** (Belgian), ii, 69.
- Arm, fractured**, treatment of, vi, 83.
- Arms and neck**, toilet treatment, iv, 51.
- Army**, preparation for, v, 226; information as to appointments, examinations, pay, etc., vi, 5-7.
- Arrears recoverable by distress**, i, 27.
- Art linen for bedroom curtains**, i, 216; art serge for embroidery, iv, 134; schools for art training, vi, 29.
- Art Union of London**, referred to, ii, 2.
- Art-work, home**, (see under Home); laundry treatment of, iii, 160.
- Artichoke soup**, iii, 32; stuffed artichokes, iii, 65; artichoke bottoms and shrimps, iii, 85; fried bottoms, iii, 94.
- Artistic decoration of ugly surfaces**: how to hide an ugly mantelpiece, and an ugly hearth, i, 88-90; the ornamental space, a substitute for an overmantel, i, 90; cretonne hangings for walls, i, 91; leather panels, and matting for walls, decoration of door panels, and of bathroom walls, i, 92; artistic floorings, i, 93; wall and ceiling decoration, with stencil design, i, 94-6; general remarks, i, 96.
- Artists**, training, prospects, etc., vi, 7; a career for women, vi, 28.
- Asparagus**, stewed, iii, 65; vol-au-vent of, iii, 65; with cheese, iii, 93; culture of, iii, 211.
- Aspect of a house**, ii, 7; "aspect" compass illustration, ii, 6.
- Aspic jelly**, ingredients, iii, 15.
- Assigning and sub-letting**, right of, i, 49.
- Assurance**. (See Insurance.)
- Athletic games**, vi, 207-9.
- Auctioneers**, training of, prospects, etc., vi, 6.
- Australian meat** (potted), ii, 218; winery (illustration), ii, 232.
- Austria-Hungary**, university education for women in, v, 260.
- Authorship**, hints and advice, v, 122; vi, 27.
- Axminster carpets**, "Crompton" and patent, i, 111, 112.

B

- Baby:** care of the mother's health—food, pure air, quiet, skilled attendance, v. 143-4; baby's outfit—clothing required, cost, woollen clothing, bassinette and basket, v. 145-9; the nursery—choice of a room, pure air, temperature, precautions, v. 149-52; care of infant after birth—warmth, first things to be done, weighing and measuring, v. 152-4; the father's duty—registration of birth, law as to vaccination, v. 154-6; nurses—their qualifications, the mother's supervision, wet-nurses' qualifications, treatment of those nursing, v. 157-160; care and management of infants—bathing, precautions in bathing, importance of sleep, dressing, v. 160-3; breast and hand feeding, mixing the milks, unwholesome diet, animal milks used, preparation of cows' milk, v. 164-9; condensed milk, rules and precautions in feeding, other infant foods, weaning, physical development, v. 169-72; perambulators and mail-carts, v. 173; various baby ailments, v. 174-7; supplementary suggestions, v. 177.
- Back bandage,** how fixed, vi. 90.
- Backgammon,** instructions for playing (with illustration), vi. 186.
- Bacon,** a guide to ordering, ii. 203.
- Badminton,** instructions for playing, vi. 175.
- Bagatelle,** instructions for playing, vi. 176-7.
- Bags, embroidered,** iv. 169.
- Bain-marie pans** (illustration), ii. 170.
- Baking,** regulation of oven, time required, iii. 2-3; baking bread, cakes, and pastry, iii. 3-4.
- Baking-powder,** composition of, iii. 15.
- Ball-cocks,** how repaired, iv. 238.
- Ball-room dancing,** how to learn, the five positions (with illustrations), vi. 162-5; the waltz, vi. 165-70; the two-step, the Boston, the polka, vi. 170-1; square dances—quadrilles, lancers, Calceionians, quadrille croise, vi. 171-2; the cotillon, good v. bad dance music, antics of the ball-room, vi. 173.
- Balls,** forms of invitation and acceptance, v. 7; usual hour for, v. 11; etiquette of country-house ball parties, v. 42. (See *Coming out of a Daughter*.)
- Banana pudding,** iii. 74; cream, iii. 76, 81; bananas à la grace, iii. 117.
- Band at wedding receptions,** etc., vi. 268.
- Bandages,** methods of making and applying, vi. 89-93.
- Bandy,** how played, vi. 209.
- Banister-brushes,** i. 187.
- Banjo,** music, price of instrument, etc., vi. 157.
- Bank of England clerkships open to women,** vi. 30.
- Banking account, wife's,** iv. 6.
- Bankruptcy of tenant,** i. 33.
- Banns, marriage by,** vi. 263, 265.
- Bantams,** iii. 202.
- Baps, Scotch,** recipe, iii. 22.
- Baptist ministers,** training information, etc., vi. 21.
- Barley-water,** recipes, vi. 109-10.
- Barnardo's, Dr., Homes,** servants trained in, ii. 79.
- Barrister,** training information, vi. 15.
- Baseball,** instructions for playing, vi. 209.
- Baskets for cutlery and silver,** ii. 131; for babies, trimming and furnishing, v. 149; illustration, v. 168.
- Basket-work.** (See *Cane Basket-work*.)
- Basques,** how to cut, iv. 129.
- Bassinette, baby's,** cost and methods of trimming, v. 148.
- Bassoon,** music, price of instrument, etc., vi. 156.
- Bath-rooms,** muraline paper for, i. 78; decoration of walls, i. 92; tiled bath-room (illustration), i. 93; heating and ventilation, floor-covering, decoration, furniture, rugs and mats, details, i. 173-4; suggestions, i. 174; spring cleaning of, ii. 150.
- Baths,** proper designs and materials, waste-pipes, etc., i. 9; unsuitable time for bathing, various kinds and their effects described, iv. 66-8; sea-bathing, iv. 68; vi. 227; bathing for babies, v. 160; for the sick, vi. 58.
- Batiste,** description and price, iv. 70.
- Batter,** how made, iii. 15.
- Bazaar, children's,** v. 208.
- Beans, French,** iii. 60; culture of various kinds, iii. 209.
- Béchamel sauce,** iii. 36.
- Bedding,** i. 166-9.
- Bed-making and airing of beds,** ii. 124.
- Bedroom furniture,** introductory, i. 163-4; the ideal bedroom, 164-5; papers and floor-covering, i. 165; curtains, bedsteads and bedding, i. 166-8, 216; furniture, toilet-ware, finishing touches, i. 169-72; suggestions, i. 172; estimates for furnishing, i. 101, 103, 105-6.
- Bedrooms,** aspect suitable for, i. 7; decoration of, i. 65; for servants, ii. 108-10; airing and arranging, ii. 125-6; spring cleaning, ii. 150.
- Bed-sores,** prevention of, vi. 56.
- Bed-spread,** illustration in ribbon work, ii. 26.
- Bedsteads,** brass, i. 164; wooden, i. 166; curtains for, i. 216; spring-cleaning of, ii. 151.
- Bed-whisk,** use of, ii. 124.
- Bee-keeping,** general remarks, v. 112; profits, v. 112; how to start, v. 112-4; the management of a swarm, v. 114; harvesting and marketing the honey, use of the extractor, v. 115; wintering the bees, and their diseases, v. 116; how to handle bees, books on the subject, v. 116-7.
- Beef,** choice of, ii. 188; prime and inferior meat (illustration), ii. 188; British and foreign compared, ii. 191; methods of pickling and salting, ii. 194; English and Scotch methods of jointing bullocks, ii. 197; best joints—names and prices, ii. 198-200; digestibility of, ii. 210; season for, ii. 211-4; potted, ii. 218; instructions for cooking, iii. 4, 8, 13; various recipes and methods of serving, iii. 56-8; time required for baking and roasting, and proportionate waste in cooking, iii. 122; carving instructions and illustrations, iv. 31-2; raw beef balls for invalids, vi. 100.
- Beef kidney,** how cooked, iii. 97.
- Beef-tea,** hints on, vi. 100-2.
- Beet-root custard and creams,** iii. 66; culture of, iii. 210.
- Belgium,** educational facilities for women in, v. 260.
- Bell,** answering the, ii. 130; repairing of electric bells, iv. 238-40.
- Belladonna,** symptoms of poisoning by, vi. 76, 77.
- Benares trays,** cleaning of, ii. 151.
- Ben Jean** (curds and whey), iii. 75.
- Bent ironwork,** i. 23; design (electric lamp bracket), i. 24; instructions and tools required, iv. 194-6.
- Benzine,** use of, iv. 88.
- Berlin cream,** iii. 75.
- Bernaise sauce,** iii. 37.
- Beurré de Fée** (macaroons and cream), iii. 75.
- Beverages,** invalid recipes, vi. 109-11.
- Bézique,** rules for playing, vi. 193.
- Bhugias** (curried vegetables), iii. 67.
- Bicycle and Bicycling.** (See *Cycling*.)
- Biennials,** varieties of, iii. 221.
- Billiards,** instructions and rules for playing (with illustrations), vi. 178-85.
- Billiard-table, and accessories,** description and prices, vi. 177-8.
- Bills, household,** checking and filing of, iv. 41; analysis of, iv. 45.
- Birds, cage;** canaries, various kinds described, v. 103-6; general management—food and water, the cage, diseases, v. 106; other cage birds, v. 107-9.
- Birthday cake,** iii. 119.
- Births,** registration of, v. 155. (See also under *Baby*.)
- Bissell's carpet-sweeper,** ii. 144.
- Bites by insects,** dogs, etc., treatment of, vi. 94.
- Black-beetles** (cockroaches), destruction of, iii. 132.
- Blackberry jelly,** ii. 225; wine, ii. 232.
- Black-currant jam and jelly,** ii. 225.
- Black eye,** treatment of, vi. 64.
- Blackheads** (acne), iv. 51; vi. 63.
- Blacklead brushes,** i. 189.
- Blankets,** quantity and prices, i. 193; origin and tests of quality, i. 197; protection from moths, i. 198; washing of, iii. 159.
- Bleaching of white clothes,** iii. 154.
- Bleeding,** arrest of, vi. 80; from the nose, vi. 81.
- Blinds,** for drawing-room, i. 150; outside, various kinds illustrated, i. 226-8; inside, i. 228-9; materials, i. 229-30; care of, i. 230; cleaning of, ii. 151; Venetian, ii. 228; ii. 159; iv. 236.
- Bloodlessness,** vi. 63.
- Blotters,** embroidered, iv. 170; design, iv. 171.
- Blouses,** laundry treatment of, iii. 163; making of, iv. 105-9.
- Blue for laundry work,** iii. 150.
- Bluecoat School, London,** information as to, v. 219.
- Boarding-houses for holidays,** vi. 226.
- Boards, stained,** how treated, ii. 129; washing of, ii. 151.

Bodice, cutting and making of, iv, 122-9.
Body, human, anatomical relations and physiological functions of, vi, 78-9.
Bohemian glass, ii, 14.
Boilers, for hot-water supply, ii, 47; for laundry, iii, 146.
Boiling instructions for meat, fish, vegetables, and puddings, iii, 4-6; boiling of clothes, iii, 153.
Boils, treatment of, vi, 64.
Bond's "euthermic" stove, ii, 44, 45.
Bones, fractured or dislocated, treatment of, vi, 81-4.
Boning, in dressmaking, instructions, iv, 128.
Boning meat, etc., methods of, iii, 6-8.
Bonnes bouches (tit-bits sandwiches), iii, 92; à la Bosnia (savoury), iii, 118.
Bonnets for young children, v, 197.
Bookbinding, training and instructions in the art, v, 137.
Book-cases, i, 158-60.
Book-clubs, iv, 210.
Book-covers, embroidered, iv, 169-70.
Book-keeping, as a career for women, vi, 30.
Book-plates, iv, 210.
Books, reference, iv, 207; care, binding, purchase, etc., iv, 209.
Boot brushes, i, 189.
Boot cleaning, ii, 141-2.
Bootikin, crochet, for baby, iv, 185.
Boots and shoes, general hints on, iv, 93; boots for gentlemen, children, and ladies, prices and materials, etc., iv, 94-5; goloshes and snow boots, iv, 95; care and repair, creaking, cleaning, patent and tan boots, iv, 96-7.
Boston dance, vi, 170.
Boston sandwiches, iii, 92.
Bottle-brushes, i, 188.
Bottled fruits, soups, sauces, etc., ii, 193-4; in syrup, various recipes for, ii, 227-9.
Bouchées de volaille, iii, 109.
Boulettes de marrons aux oranges, iii, 115.
Bow china, ii, 9.
Bowls, instructions and requisites for playing, vi, 209.
Boxes, for travelling, vi, 228.
Boxing, vi, 209.
Box-ottoman for bedrooms, etc., i, 154; for flat furnishing, i, 207.
Boy clerks (Civil Service), appointments, vi, 11.
Boys' clothing, print or flannel shirt, v, 190; serge suit, v, 196; suits made out of adult garments, v, 199-201.
Boys' education. (See under Education.)
Brahmahs (poultry), iii, 182.
Braiding, methods of, iv, 119-20.
Brain, concussion of the, treatment, vi, 87.
Braising, method described, iii, 8.
Brakes for bicycles, v, 62.
Bran-water, use of, iii, 150; bran bath, iv, 67; bran-tea, vi, 110.
Brandy sauce, vi, 253; custard, vi, 110.

Brass fenders, cleaning of, ii, 121; rods and ornaments, and other brass-work, cleaning of, ii, 151; musical instruments, vi, 196.
Bread, amount of water in, ii, 206; organic constituents in, ii, 208, 209; uses of stale bread, iii, 16; how to freshen, iii, 19; home-made, iii, 3; bread for invalids, vi, 101.
Bread-and-butter soufflé, iii, 72; pudding, iii, 74.
Bread-making; regulation of oven, iii, 3; general instructions, etc., iii, 18; recipes for various kinds, iii, 19-23.
Bread-pan, iii, 19.
Bread poultice, vi, 60.
Bread sauce, iii, 37.
Breakfast cookers, ii, 180; electric apparatus (illustration), ii, 182.
Breakfast dishes, various recipes and methods of serving, iii, 96-100.
Breakfast rolls, iii, 19.
Breakfast-room, arrangements—fireplace, carpets, curtains, window seat, furniture, decorative effects, i, 155-8; suggestions, i, 158; cleaning and arranging of, ii, 123.
Breakfast savoury, iii, 97.
Breakfast-table, arrangements and requirements for, ii, 123.
Breaks in leases, i, 57.
Breast, inflammation of, treatment, v, 174.
Brewer, training information, vi, 4.
Bric-à-brac: pottery and porcelain—china, ii, 8; Chelsea, ii, 8; Bow and Derby, ii, 9; Plymouth, Liverpool, and Worcester, ii, 10; Wedgwood, Doulton, and other English china, ii, 11; Dresden, ii, 11; Sèvres, ii, 12; Oriental and Persian, ii, 12; arrangement for ornamentation, ii, 13; glass, ii, 13.
Bride, etiquette for, after marriage, v, 5; bride and bridesmaids, dresses, etc., vi, 267, 268.
Bridegroom, presents from the, vi, 269.
Bridge, instructions for playing, vi, 104.
Brill, how to cook, iii, 40; and carve, iv, 34.
Brining, in butter-making, iii, 171.
Brîoches (French buns), recipe, iii, 24.
Broccoli, how to grow, iii, 210.
Broiling, instructions for, iii, 8.
Bronchitis, treatment of, v, 174; vi, 64.
Bronzes, cleaning of, ii, 152.
Brooms and brushes, for kitchen, list, i, 178, 180; various kinds described and illustrated, i, 186-9; ii, 127; cleaning of, ii, 133.
Broughams, prices, etc., v, 44.
Browning for cooking, iii, 17.
Browning sauce, ii, 222.
Brown pudding, recipe and illustration, iii, 72, 78; sauces, iii, 37, 38; soups, iii, 29, 30.
Bruises, treatment of, vi, 93.
Brush and comb, selection and cleaning of, iv, 64.
Brushes, paint, i, 71-2; for white-washing, i, 73; for floor painting, i, 87; for staining, i, 86; for buttoned upholstery, ii, 125.
Brussels carpets, description and prices, i, 112, 119.

Budding and grafting of fruit-trees, iii, 217.
Bugs and fleas, destruction of, iii, 133.
Buhl cabinets and ormolu, cleaning, ii, 152.
Builders, information as to training, etc., vi, 9.
Bulbs and tubers for flower-garden, iii, 224.
Bullock, methods of jointing, ii, 197, 199.
Bungalows, building, material, &c., i, 18.
Bunions, treatment of, iv, 57; vi, 64.
Buns, French (brioches), iii, 24.
Burglary, insurance and precautions against, iv, 25, 26.
Burners, gas, various kinds, ii, 60-4; incandescent, ii, 65; for lamps, ii, 68-9.
Burns, treatment of, vi, 93.
Butler's pantry. (See Pantry.)
Butter, hints as to purchasing, ii, 187.
Butter-cakes, iii, 24.
Butter-making: creaming system, iii, 168; churning, iii, 169-71; dry-salting and brining, iii, 171; butter for keeping, iii, 172; causes of bad butter, ii, 173-4; care in keeping, iii, 177.
Butter-milk bread, iii, 19.
Butter prints and cups, i, 180.
Butter sauce, iii, 39.
Buttocks, bandages for, how made and fixed, vi, 92.
Button-holes, making, iv, 127; scissors for, iv, 129; embroidery stitches, iv, 137.
Buttons, sewing on of, iv, 85, 127.
By-laws and restrictions as to sites, i, 17.

C

Cabbage soup, iii, 30; culture, iii, 210; à la crème (in white sauce), iii, 67.
Cabinets, drawing-room, i, 152; buhl, ii, 152.
Cadetships (naval), information regarding, vi, 19.
Cairene work case for chimney-piece, i, 89.
Cakes, recipes for various kinds, iii, 23-6; iii, 119-20. (See under special names.)
Caledonians (square dance), vi, 172.
Calf, plan of jointing (illustration), ii, 204.
Calf's brain fritters, iii, 97; calf's tail soup, iii, 102.
Calico, description and price of material, iv, 70; mending of underwear, iv, 81-2.
Calling cards. (See Visiting cards.)
Callisthenics. (See Gymnastics, also Physical training.)
Calls, etiquette of paying and receiving, and of card-leaving, v, 3-6.
Cambric, description and price of material, iv, 70.
Camping, suggestions, etc., vi, 241.
Canadian omelet, iii, 97.
Canapés à l'Ancienne, iii, 118.
Canaries, various kinds and their treatment, v, 103-6.

Cane and wicker chairs, cleaning, ii, 152; re-seating, iv, 231.

Cane basket-work, tools and method of working, iv, 199-203.

Canvas embroidery, iv, 155-8. (See under Embroidery.)

Caper sauce, iii, 37; brown, iii, 38.

Capes, golf and circular, making of, iv, 110, and plate G; for girls, v, 195.

Capon, larded and stuffed, iii, 62; jointing and carving, iv, 35.

Caramell, how made, iii, 17.

Caravanning, suggestions, etc., for, vi, 240.

Card-leaving, v, 2-6.

Cards, instructions and rules for various games—all-fours, vi, 192; bézique, vi, 193; bridge, vi, 194; cassino, vi, 195; catch-the-ten, cribbage, vi, 196; écarté, vi, 197; euchre, loc. vi, 198; Napoleon or Nap, vi, 199; piquet, vi, 200; poker, Pope Joan, vi, 201; solo whist, vi, 202; vingt-et-un, vi, 203; whist, vi, 204-6.

Career, choice of a: final education of boys for professions, public service, commerce, etc, 225-33; occupations for men, vi, 1-27; for women, vi, 27-39. (See names of special occupations.)

Carnations, culture of, iii, 225.

Carpentering, home, ii, 23; tools, iv, 218-30; repairing furniture, iv, 230-6.

Carpet-sweeper, prices, i, 187; Bissell's, ii, 144.

Carpets: estimates of cost for house-furnishing, i, 98, 99, 103-5, 119; advice on second-hand purchase, i, 102; packing instructions for removal, i, 108; stair carpets, i, 115, 132; description and prices of various makes, i, 109-16; tests of quality, i, 114; sweeping carpets, ii, 121, 152; treatment of faded, greasy and tar-stained, and moth-eaten carpets, ii, 122, 153; removal of whitewash, stains, ii, 152-3; and of ink spots, ii, 155. (For special makes, see their names; see also names of rooms, and Floor-coverings.)

Carriages, use and purchase of, v, 44; rubber tyres for, v, 46; care and cleaning, v, 50.

Carrots, how to boil, iii, 6; recipes, iii, 67; culture of, iii, 210.

Carving, instructions and illustrations for meat, fish, poultry and game, etc., iv, 31-7.

Carving, wood, hints, ii, 22; as a career, vi, 8.

Caseln in food, ii, 208.

Casement windows, draperies for, i, 222.

Cashmere, description and price, iv, 70; mending and cleaning, iv, 82, 89.

Caskets, embroidered, iv, 171.

Cassava pudding, iii, 72.

Cassino, instructions for playing, vi, 195.

Castor grooves, use of, i, 115; fixing of new castors, iv, 231.

Catarrh, treatment of, vi, 65.

Catch-the-ten, instructions for playing, vi, 196.

Cats, various kinds described, treatment, distemper and other ailments, accidents, etc., v, 100-3.

Cauliflower, culture of, iii, 210.

Cedar felt, use and price of, i, 116.

Ceilings, inspection of, on choosing a house, i, 15; whitewashing and distempering, i, 73-5; decoration, i, 83, 94-6; cleaning, ii, 127; protection against lamps, etc., ii, 58.

Celery: soup, iii, 32, 34; fried, iii, 67; salad, iii, 90; culture, iii, 210; for use of invalids, vi, 102.

Celestial jelly, iii, 80.

Cellars and store-rooms, spring cleaning, ii, 150.

Cement, china, i, 184.

Cendrillons de filets de sole, iii, 107.

Central squares (carpets), i, 114.

Centre-spreads for table decoration, v, 21-5.

Cereal puddings, with eggs, for invalids, vi, 102.

Cesspools, position, etc., i, 10.

Chairs, for dining-room, i, 136-7, 139; drawing-room (designs), i, 150; library, i, 158; kitchen, i, 175; slips and covers for, i, 235-8; dusting of leather-covered chairs, ii, 129; cleaning of cane and wicker, ii, 152; and re-seating, iv, 231.

Chamois leather, how washed, ii, 153.

Chapelure, how made and used, iii, 16.

Chaperon at a ball or dance, duties, etc., vi, 259.

Chaplains in the navy, information regarding, vi, 20.

Chapped hands, treatment of, vi, 64.

Characters, written, for servants, ii, 82; the giving of, legally considered, ii, 105.

Charades for children, v, 212.

Charitable institutions, domestic servants from, ii, 79.

Charwomen, remarks on, ii, 85; selection, and duties, ii, 146.

Chasing, tools for (illustration), v, 140.

Chaudroid aspic, iii, 17.

Cheese-making: cream cheese, Gervais cheese, small cheeses, iii, 174-6; care of, iii, 177.

Cheese rissoles, iii, 84, 88; devilled, iii, 85; balls, iii, 88; soufflé, iii, 88.

Chelesea porcelain, ii, 8.

Cheltenham Ladies' College, information regarding, v, 249.

Chemists, training information, etc., vi, 18.

Chenille embroidery, iv, 191.

Cherries, bottled, ii, 228; good varieties, iii, 219.

Cherry syrup, ii, 229; brandy, ii, 230; wine, ii, 234.

Cheese, instructions for playing (with illustration), vi, 187-9.

Chest bandages, vi, 90.

Chest of drawers, for flat fitments, i, 206.

Chestnut sauce, iii, 38; shape, iii, 76.

Chicken, chaudroid of, iii, 49; cutlets, iii, 49; in little cases, iii, 52; stewed with green peas, iii, 52; salad, iii, 55; with mushrooms, iii, 93; shapes, iii, 94; à la crème, iii, 109; à la Montrose, iii, 112; jointing and carving, iv, 35; chicken dishes for invalids, vi, 102.

Chicken-rearing: nest for hatching, eggs for hatching, testing their fer-

tility, iii, 194; hen-coops and their position, iii, 195; management of young chickens and of older ones, iii, 196, 197; gaps in chickens, iii, 197.

Chiffon, washing and ironing, iii, 163.

Chilblains, treatment of, iv, 54; vi, 64.

Child crowing, treatment of, v, 175.

Children, management of: meals during second year, v, 178; from second to fifth year and beyond, v, 179; lesson hours, overwork, v, 180; exercise, indoor and outdoor, forms of exercise, v, 181; discipline and early training—management, temper in children, punishment, v, 182-4.

Children's amusements: tableaux, v, 202-4; plays, v, 204-6; impromptus, Christmas amusements, v, 206-8; bazaar, v, 208; parlour games, various kinds, v, 209-14.

Children's dress: materials and making up, v, 185; underclothing—chemise, knickerbockers or drawers, v, 186-8; combinations, night-dress, v, 188-9; boy's print or flannel shirt, v, 190; girls' dresses—instructions and diagrams for making, v, 191-6; boy's serge suit, v, 196; millinery for young children—instructions for making and illustrations, v, 196-9; adaptation of garments, v, 199-201.

Chimneys on fire, prevention, and liability, ii, 57.

China, hints on choosing, i, 183; to harden and wash, i, 184; ii, 128; china cement, i, 184; to mend, iv, 240. (See also under Bric-à-brac.)

Chintz, how washed, iii, 161.

Chippendale furniture for dining-room (illustrated), i, 135; chair designs (illustration), i, 136; for drawing-room (illustration), i, 146-7, 151.

Chloral, poisoning by, treatment, vi, 76.

Chocolate éclairs (cakes), iii, 24; cake, iii, 81.

Choice of a house. (See under House.)

Choking, treatment of, vi, 88.

Christmas: observance, decorations, festivities, fare (plum-pudding, roast turkey, etc.), vi, 249-55; amusements for children, v, 206-8; Christmas cake, vi, 254.

Christmas gifts to servants, ii, 115.

Christ's Hospital, London, educational advantages, v, 219, 248.

Chromo-lithography, as an occupation for women, v, 122.

Chrysanthemums, culture of, iii, 226.

Church decoration in London, i, 94.

Church of England, appointment information, etc., vi, 21.

Churning and churns (with illustrations), iii, 169-71.

Chutney, ii, 220.

Chuttra salad, iii, 89.

Cider, ii, 232.

Cinder-sifter on rockers (illustration), ii, 121.

Cisterns, water, essentials of, i, 12; attention to, iv, 30.

Civil Service, preparation of boys, v, 226; Home Service appointments for clerks, inspectors, etc., vi, 9-12; Indian, Colonial, etc., appointments, vi, 12; for women (post office), vi, 31.

- Claret jelly, iii, 115.
- Clarinet, music, price of instrument, etc., vi, 156.
- Clergy appointments, information on choice of a career, vi, 21.
- Clerkships, training for, v, 229; in Civil Service, vi, 9-12; clerks and commercial employes, vi, 12-3; in the navy, vi, 20; clerkships for women, vi, 30, 31.
- Clocks, grandfather's, for hall, i, 124; for kitchen, i, 177.
- Cloth dress material, description and price, iv, 71; mending and pressing, iv, 82; renovating, iv, 88; storing away, iv, 92.
- Clothes, treatment of soiled, iii, 136; counting of for laundry, iii, 137; storing away, iv, 92.
- Clothing: economic hints, iii, 126, 130; iv, 44; brushing, removal of stains, iv, 87; instructions for putting away, iv, 92; influence of proper clothing on the health, vi, 48-9; disinfection of, vi, 52.
- Clave cordial, ii, 230.
- Coach-house, inspection of, iv, 30; construction, etc., v, 52.
- Coachman, engagement and duties, v, 53.
- Coachman-gardener, duties, etc., ii, 136-8.
- Coal, economic use of, iii, 124.
- Coal-box for drawing-room, i, 146.
- Coal-gas. (See Gas.)
- Coal hod or scoop for kitchen use, i, 176, 177.
- Coat collar, how made, iv, 114.
- Cochins (poultry), iii, 182.
- Cockroaches, how to destroy, iii, 132.
- Cocoa-nut fancies, iii, 120; matting, i, 117, 166; pie, iii, 75.
- Cod, cooking instructions, iii, 41.
- Codcils in wills, iv, 3, 15.
- Coffee ice pudding, iii, 80; jelly en surprise, iii, 114; stains, iii, 151.
- Colander (illustration), ii, 173.
- Cold cream recipes, iv, 48.
- Cold in the head, treatment of, vi, 65.
- Colic, treatment of, v, 175; vi, 65.
- Collapse after accident, treatment, vi, 87.
- Dollar-bone, fractured, "first aid" treatment, vi, 82.
- Collars, instructions for cutting, iv, 113-5; for making, iv, 132.
- Dollars and cuffs, starching and ironing, iii, 135; Irish lace (illustration), iv, 182.
- Colleges, for the learned professions, v, 230; open to women, v, 253.
- Colour in the home: gradation, properties, and harmony of colours; i, 60-1; in the drawing-room, i, 61-4; in the dining-room, i, 64-5; in the library, i, 65; hall and staircase, i, 65; in bedrooms, i, 65-6; general advice on colouring, i, 66; in floor coverings, i, 110.
- Colour wood-blocks, printing from, v, 136.
- Colza lamps, ii, 67.
- Coming out of a daughter: advice to mother, hints as to conversation, a graceful carriage, dress, the first ball, chaperons, ball-room etiquette, etc., vi, 257-60; presentation at court, court dress, going to court in the ball-room, vi, 261.
- Commercial education: training for clerkships, etc., degrees in, v, 229, 230.
- Commercial travellers, prospects of, as a career, vi, 14.
- Compensation Act, Workmen's, employers' liabilities under, ii, 91-4, 116-7.
- Complexion: nature of the skin, vapour baths, care of complexion, soaps and face-powders, wrinkles, freckles, acne, the arms and neck, iv, 46-51.
- Compote of iced fruit, iii, 81.
- Concerted music, vi, 157.
- Concussion of the brain, treatment, vi, 87.
- Confectionery: bread-making process and various recipes, iii, 18-23; cake recipes, iii, 23-6; pastry-making (recipes), iii, 26-8.
- Confinement, care of the mother's health, v, 143.
- Congregational minister, training information, etc., vi, 21.
- Consommé, how to make, iii, 101; recipes, iii, 101.
- Constipation, treatment of, v, 175; vi, 65.
- Consumption, treatment of, vi, 65.
- Continental education, v, 258-61.
- Contract, servants', duration of, ii, 88; master's liability for, ii, 97-9; determination of, ii, 101-4; practical advice as to, ii, 107.
- Convalescence, care required during, vi, 98.
- Conversational power, cultivation of, vi, 257.
- Convulsions, treatment of, v, 175; vi, 87.
- Cookery: introductory, iii, 1-2; various methods and processes of cooking, iii, 2-15; list of cooking adjuncts, iii, 15-8; confectionery: bread-making recipes, iii, 18-23; cake recipes, iii, 23-6; pastry-making recipes, iii, 26-8; soup recipes, iii, 28-36; sauce recipes, iii, 36-40; fish, iii, 40-7; entrées, iii, 47-55; meat, poultry, and game, iii, 56-65; vegetables, iii, 65-71; puddings, iii, 71-5; sweets, iii, 75-8; ices, iii, 79-80; sweets for a children's party, iii, 80-3; savouries, iii, 84-9; salads, iii, 89-91; sandwiches, iii, 92; preserved meat, vegetables, and fruit, iii, 93-6; inexpensive breakfast dishes, iii, 96-100; additional recipes—soups, iii, 101-3; dressed fish, iii, 103-5; fish entrées, iii, 105-6; cold fish dishes, iii, 106-7; entrées, iii, 107-11; removes, iii, 111-2; cold dishes for ball suppers, iii, 113-4; sweet dishes, iii, 114-7; savouries, iii, 117-9; cakes, iii, 119-20; list of adjuncts for various dishes, iii, 120-1; approximate time required for baking and roasting meat, iii, 122; proportionate waste in cooking, iii, 122; educational facilities for training in cookery, v, 251, 252. (See also under special names, as Baking, Boiling, Roasting, etc.; also under Invalid cookery, and Utensils for cooking.)
- Cooking ranges and stoves (with illustrations), ii, 174, 183. (See under Kitchen range, and Stoves.)
- Cook's department: her character, personal appearance, and dress, ii, 82, 161-2; qualifications and daily duties, ii, 162; the meals, ii, 164-6; rate of wages, ii, 166; extra duties, ii, 166-8; washing up, ii, 168-70; care of utensils—metal and earthenware pans (illustration), ii, 170; wooden articles, jelly-bags, and pudding-cloths, sieves, tinware, ii, 171-2; the kitchen-range, management, etc., ii, 172-8; gas and oil stoves, ii, 178-82; electric cooking appliances (illustration), ii, 182-3.
- Cordials, various recipes for, ii, 230.
- Cork-carpeting, i, 116, 165.
- Cornets, vegetable, iii, 68; cream, iii, 76.
- Cornices, decoration of, i, 83.
- Corns, treatment of, iv, 56; vi, 65.
- Corporal punishment of children, v, 184.
- Correspondence: arrangement of letters for reference, answering letters, requisites, etc., post-office regulations, modes of addressing titled persons, iv, 211-4; scrap-book, etc., iv, 214-7.
- Corridors, treatment of long, i, 130.
- Cosy-corner, illustrations, arrangements, etc., i, 148, 232.
- Cot (baby's), illustrations, v, 163, 164.
- Cotillion, dancing instructions, vi, 173.
- Cottage, hire of, for holidays, vi, 227.
- Cotton: origin of, i, 126; dress materials, classes and kinds, iv, 69-74; testing of, i, 126; iv, 75; mending and storing away of cotton goods, iv, 76, 81, 92.
- Cotton-reels, economic use of, iii, 129, 130.
- Cotton sheets, compared with linen, i, 125.
- Couches and sofas for drawing-room, i, 154; slips for, i, 238.
- Country bread, recipe, iii, 19.
- Country houses, choice, i, 1; enter taining at, v, 41.
- County and borough rates, i, 38.
- Covenants, to insure and repair, 26; to pay rent, i, 36; for sub-letting, i, 40; for good title and quiet enjoyment, i, 41.
- Cows, types of dairy (illustration), iii, 170, 174.
- Cowslip wine, ii, 232.
- Cramp, precaution, iv, 68; treatment, vi, 66.
- Crayfish soup, iii, 94.
- Cream cakes, iii, 77; cheese, iii, 17; cornets, iii, 76; jumbles, iii, 76; sauces, iii, 38, 40.
- Creaming system in dairy-work iii, 163; causes of sleepy cream iii, 174.
- Creams, vegetable, iii, 66, 67, 69, 70; sweet (recipes), iii, 75-8, 115-7; iced, iii, 79-80; for children's party, iii, 80-3.
- Credit, pledging, iv, 5, 17.
- Creditors, gifts in fraud of, law a to, iv, 11, 20.
- Creeper and climbers for flower garden, iii, 226-7.
- Creosote, use of, for toothache, iv, 5.
- Crépinettes, instructions for making, iii, 47-8; of pork liver, iii, 45 of game, iii, 50.
- Cretonne hangings for walls, i, 91.
- Crewel-work, washing of, iii, 161.
- Crib (baby's), illustration, v, 161.
- Cribbage, rules for playing, vi, 165

Cricket, instructions for playing, vi, 210.

Criminal offences of servants, law as to, ii, 100-1.

Crochet work: single, double, and treble crochet, insertions for lingerie, lace patterns, Irish lace collars and cuffs, baby's bootikin, hairpin work, iv, 179-87.

Crockery and cutlery for kitchen use, i, 180.

Crompton Axminster carpets, i, 211.

Crops, table of vegetable, for each month, iii, 208.

Croquet, instructions for playing, vi, 211-3.

Croquettes, recipes, iii, 77, 108.

Cross-stitch, iv, 158-61. (See under Embroidery.)

Croton oil, symptoms and treatment of poisoning by, vi, 76, 77.

Croup, treatment of, v, 176; vi, 66.

Croustades, recipes, iii, 110, 117, 118.

Croûtes, recipes, iii, 84, 101, 118.

Cruet bottles, cleaning, ii, 133.

Crumb-cloths for carpet, i, 118.

Crumb-tray, ii, 123.

Crumpets, recipes, iii, 20.

Cucumbers aux œufs, iii, 108; culture of, iii, 210, 235.

Cupboard, linen, i, 191-8. (See Linen cupboard.)

Cupboard, store, general hints as to management, etc., i, 189-91; preserving of eggs for winter, ii, 215; curing of hams, ii, 216; potted meats, ii, 218-20; making of pickles, ii, 220-2; making of sauces, ii, 222-3; jams and jellies, ii, 223-7; bottled fruits in syrup, ii, 227-9; fruit syrups, ii, 229-30; cordials, ii, 230; home-made wines, ii, 231-5.

Curds and whey, instructions for making, iii, 75.

Curling, how played, vi, 213.

Current jams and jellies, ii, 225; syrup, ii, 229; wine, ii, 233.

Currants in syrup, ii, 228; good varieties, iii, 219.

Curry and curried dishes: dry curry with sambol, iii, 50; dry curry, iii, 111; vegetable curry, iii, 68; curried vegetables (Bhugias), iii, 67; curried potatoes, iii, 69; curried pilchards, iii, 94; curried eggs, iii, 98.

Curtain-brooms, i, 187.

Curtains and draperies: choice of material, i, 209; for dining-room, i, 211; for drawing-room, i, 150, 212-4; for oriel windows, i, 214; for hall and door, i, 215; for bedroom and bedsteads, i, 166, 216; lace and muslin curtains, i, 217-21; wash, i, 221; casement windows, i, 222; mantle-board drapery, i, 224; piano-back drapery, i, 224; hall curtains, i, 224; slips for curtains, i, 231; cleaning of, ii, 153; washing, boiling, starching, and tinting, iii, 162; mending, iv, 84. (See also Break-fast-room, Library, Kitchen.)

Cushions for chairs, i, 238; embroidered, iv, 168, 172.

Custard pudding, iii, 73; brandy custard, vi, 110.

Custody of children (legal), iv, 7, 18.

Customs officers, information regarding, vi, 10.

Cutlery, for kitchen, i, 180; choice and prices, i, 185; treatment of handles, i, 185-6; sharpening and cleaning of knives, i, 186; basket for, ii, 131.

Cutlets, egg, iii, 109; chicken, iii, 114.

Cuts, simple, treatment of, vi, 81.

Cycle touring, vi, 236-40.

Cycling, choice and parts of a cycle, v, 54-6; the weight question, v, 56; change-speed gears, v, 57-9; tyres and punctures, v, 59-60; saddles and lamps, v, 61; brakes, learning to ride, tricycles, 62-3; cycling as an exercise for children, v, 182.

Cylinder system for hot-water supply, ii, 54-6.

D

Dados, designs and materials, i, 82.

Dairy: general requirements, a model dairy (illustration), utensils and their care, dairymaid, iii, 166-8; butter-making, iii, 168-73; causes of bad butter, iii, 173; cream-cheese and cream, iii, 174-6; marketing of the produce, iii, 177; care of dairy produce in the house, iii, 177.

Damask table-cloths, merits of, i, 194.

Dames d'honneur, iii, 77.

Dampers, in kitchen range, ii, 174.

Damson jam, jelly, and cheese, recipes for, ii, 225; wine, ii, 233.

Dance music, composers of, vi, 173.

Dances: invitations, v, 35; preparation of rooms, v, 36-8; dress, arrival, reception, and entertainment of guests, v, 38; management of the dancing, refreshments, subscription, and bachelors' and spinners' dances, v, 38-9; stable accommodation, departure of guests, v, 39. (See also Ball-room dancing.)

Dandruff, removal of, iv, 64.

Darioles de poisson à la Ravigote (fish entrée), iii, 106.

Darning, iv, 76-87. (See under Dress.)

Dead's part, in Scotch wills, iv, 13.

Deafness, cause and treatment, vi, 66.

Death, notice to registrar, inquest, funeral arrangements, vi, 95-6.

Decanters and water bottles, brushes for, i, 189; cleaning, ii, 132, 153.

Decoration of the house: colour in the home, i, 60-7; professional and amateur decorating compared, i, 67-70; painting, i, 70-2; white-washing and distemping, i, 72-6; wall coverings, i, 76-85; staining or painting floors, i, 85-8; artistic decoration of ugly surfaces, i, 88-96. (See under these special headings.)

Decorations for Christmas, vi, 249-52.

Decorative arrangement of plants in the house, ii, 27-36. (See Plants.)

Decorative suggestions for amateurs: painting, ii, 18-21; poker-work, ii, 21-2; carving, ii, 22; carpentering, ii, 23; metal-work, ii, 23-4; embroidery, ii, 25-7.

Defective children, schools for, v, 220.

Delaine, washing of, iii, 158; description and price, iv, 71.

Dentifrice recipe, iv, 59.

Dentists, training information, etc., vi, 17.

Department, means of acquiring a graceful carriage, vi, 258.

Derby porcelain, ii, 9.

Designers, training information, prospects, etc., vi, 8.

Detached and semi-detached houses, i, 2.

Deville peas, iii, 68; tomatoes, iii, 71; shrimps, cheese, etc., iii, 85.

Devonshire cream, iii, 175.

Diarrhoea, treatment of, v, 176; vi, 66.

Diet, advantages of mixed, amount of food for an average healthy man, chemical constituents of food, digestibility of various foods, ii, 209-10.

Digestion of food, ii, 205; time required for various kinds of food, ii, 210; process of, vi, 47, 79.

Dining-room furniture and decoration, i, 64; oak furniture, and prices, i, 133-5; Chippendale furniture, i, 135-6; chairs, i, 136-7; sideboards, i, 137; dining-tables, i, 138, 139; cheap dining-room schemes, i, 138; arrangement, i, 139; suggestions, i, 140; estimates for furnishing, i, 98, 103, 105; for carpets, i, 119. (See Flats and Curtains.)

Dinner dishes. (See Cookery, also names of dishes.)

Dinner menus, specimens and arrangement, v, 14-7.

Dinner parties: invitations, v, 8; etiquette, v, 13; specimen menus, v, 14; arrangement of the menu, v, 15-7; the cook's preparation, v, 17; wines, v, 17; laying the table, and waiting at table, v, 18.

Dinner-table arrangements (illustration), ii, 130-2; instructions for waiting at table, v, 18. (See Table decoration.)

Diphtheria, treatment of, vi, 66.

Discipline and early training of children, v, 182-4.

Disease, prevention of, vi, 41.

Diseases. (See Ailments.)

Dish-covers, cleaning of, ii, 153.

Dishes, cold, for ball-suppers, iii, 113; sweet, with recipes, iii, 114-7.

Dishes and drinks, cooling of, vi, 98.

Disinfectants, value of various, vi, 43.

Disinfection of sick-room and of clothing, vi, 52.

Dislocations, treatment of, vi, 84.

Dismissal of servants, legal grounds for, ii, 103; damages for wrongful dismissal, ii, 104.

Dispenser: training information, etc., vi, 18; as a career for women, vi, 32.

Distemping, ingredients, implements, method of application, etc., i, 73-6.

Distress for rent, landlord's right to, i, 27-35. (See Landlord and tenant.)

Divorce and matrimonial causes, iv, 11, 20.

Doctor, choice of, a, vi, 53; duties to him, fees, consultations, etc., vi, 53-5. (See also Medical attendance, Medical profession.)

Dog-bites, treatment of, vi, 94.

Dogs, choice as house-guard or companion, v, 68; various kinds de-

- scribed and illustrated, v. 68-89; general management — kennels, bedding, feeding, exercise, v. 89-91; general treatment in health, v. 91; diseases and ailments, v. 91-8; training, v. 98; tax, dog clubs, publications relating to dogs, v. 99.
- Domestic economy**, educational facilities for training in, v. 251-3.
- Domestic pets**: dogs, v. 68-99; cats, v. 100-3; cage birds, v. 103-6; other cage birds, v. 107, 109; monkeys and marmosets, v. 109; rabbits, v. 110.
- Domestic service**, general remarks on, ii, 77; domestic and menial servants distinguished, ii, 86-7. (See *Servants*.)
- Dominoes**, instructions for playing, vi, 189.
- Donatio mortis causa**, iv, 11, 19.
- Doors**, condition in choosing a house, i, 15; decoration of panels, i, 92; curtains, i, 215; draughts, i, 231, 232; iv, 235; fittings (locks, keys, and handles), repair of, iv, 232; washing of steps, ii, 124.
- Dorkings** (poultry), iii, 81.
- Doulton pottery**, ii, 11.
- Doyleys**, embroidered, specimens, iv, 150; canvas, iv, 157; crochet designs, iv, 186, 187; in tatting, iv, 188; in Hardanger work, iv, 190.
- Drains and drainage**: house drains and cess-pool, i, 8, 10; tests for leaking drains, and sanitary report, i, 10-11; garden drainage, iii, 205; flushing of, vi, 44.
- Draperies**. (See *Curtains*.)
- Drapers' sales**, hints as to bargains at, iii, 130-2.
- Drapery and clothing**, hints on purchasing, iv, 44; drapery embroidery, iv, 188.
- Draughts**, causes and cure, i, 230; draughty floors and doors, i, 231; iv, 235; portières and screens, i, 231, 232.
- Draughts, game of**: instructions for playing, vi, 169; draught-board games, vi, 190-1.
- Drawing-room**: colour and decoration, i, 61-4; examples of wall-paper decorations, i, 76-7; furniture, introductory, i, 140-2; various styles, decoration and cost (illustrations of drawing-rooms and cosy corners), i, 142-9; papers, carpet, blinds, curtains, and chairs (Hepplewhite designs), i, 149-51; tea-tables, cabinets, overmantels, pianos, sofas and couches, i, 151-4; general suggestions, i, 154; estimates for furnishing, i, 99, 104, 145, 147; for carpets, i, 119. (See *Curtains*, also *Flats*.)
- Drawn-thread work**: instructions and designs, iv, 146-51.
- Dresden china**, ii, 11.
- Dress**, choice and care of; materials, different classes and kinds, iv, 69-74; tests for different materials, iv, 74-6; mending and darning equipment, iv, 76-8; mending hosiery and stockingette garments, iv, 78-81; mending calico underwear, iv, 81; mending woollen dress-fabrics (cashmere and cloth), iv, 82; mending silk, iv, 83; mending house-linen (bed- and table-linen, towels, curtains, etc.), iv, 83-5; mending odds and ends—sewing on strings, buttons, hooks and eyes, working loops, mending gloves, iv, 85-7; the care of clothes—brushing, folding, re-
- moving stains, treatment of silk and velvet, lace and other materials, gloves, hats, feathers, flowers, umbrellas and sunshades, mackintoshes, iv, 87-92; putting clothes away, general advice, iv, 92; boots and shoes—general remarks, purchase of boots, ladies' boots, goloshes, snow-boots, care and repair, creaking, cleaning, patent and tan boots, iv, 93-7.
- Dress** (special), suitable for servants, ii, 113; for housemaid, ii, 118; for cook, ii, 161; for children, v, 185-201. (See under *Children*.)
- Dresser**, antique, used as side-board, illustration, i, 137.
- Dressing-gowns**, hints for making, iv, 105; for girls, v, 194.
- Dressmaking as a career** for women, vi, 36.
- Dressmaking, home**: systems with and without charts, iv, 98; adaptation of patterns (use of paper patterns), iv, 99-103; measurements (with illustrative plates), iv, 103-5; cutting out garments from flat bodice patterns (blouses and capes with diagrams), iv, 105-11; cutting out plain and fancy sleeves, iv, 111-3; collars (upright and turned-down), neck-bands, coat collars, iv, 113-5; skirts: making, pockets, waistband, finishing at foot, iv, 115-9; simple trimmings: braiding, revers, cross or crossway bands, frills, kiltings, iv, 119-22; bodice cutting and making: cutting out, tacking, fitting, stitching, overcasting, pressing, fastening, boning, basques, iv, 122-9; sleeve-making: cutting out, tacking, fitting, overcasting, and pressing, facing, putting into bodice, iv, 130-2; collar-making: cutting out, tacking and making, putting on to bodice, iv, 132-3.
- Dripping**, method of clarifying, iii, 9.
- Driving**. (See *Riding and driving*.)
- Drowning**, methods of treatment, vi, 86-7.
- Druggists for floors**, i, 118.
- Drugs**, list of, for common ailments, vi, 51.
- Drying clothes**, hints on, iii, 154.
- Dry-salting of butter**, iii, 171.
- "Duchesse" blinds**, i, 230.
- Ducks and ducklings**, cookery instructions, iii, 63; carving, iv, 35.
- Dumb-bell exercises**, instructions and illustrations, vi, 133-7.
- Duplex lamp burners**, ii, 69.
- Dust-bin**, use and management, ii, 166, 167; vi, 44.
- Dusting**, instructions, ii, 122; brushes for, i, 188.
- Dutch carpets**, i, 114.
- Dutch sauce**, iii, 38.
- Dyeing or tinting lace curtains and lace**, iii, 162, 163.
- Dyspepsia**, treatment of, vi, 67.

E

- Earache**, treatment of, vi, 67.
- Ears**, care of, iv, 51; removal of foreign bodies in, vi, 88.
- Earth-closets**, i, 18.
- Earthenware jugs**, decorative treatment, ii, 20.
- Easter eggs**, vi, 256.

- Easy-chair slip**, i, 237.
- Écarté**, instructions for playing, vi, 197.
- Economy**. (See *Household economy*, *Domestic economy*.)
- Education Department**, appointment of women teachers in schools under, vi, 24.
- Educational systems of the United Kingdom**, recent progress and changes, v, 237-42.
- Education of boys**: general remarks, v, 215; choice of a school, scholarships, information, v, 216; day and boarding schools, private tuition, public and grammar schools, Christ's Hospital, mixed, private, and other schools, school for the abnormal and defective, v, 217-20; public education in England and Wales, in Scotland, in Ireland, v, 220-1; primary and secondary education, v, 221; preparatory education: kindergarten and preparatory schools, v, 223; secondary education: lines of study, duration, examinations, v, 223-5; final education: the public service, v, 225; technical education: special training, training for handicrafts, higher technical education, v, 226-9; commercial education: training for clerkships and higher commercial education, v, 229; education for the learned professions, detached colleges, university education, examining, teaching, and residential universities, v, 230-3; foreign education, v, 233; supplementary education, evening schools, university correspondence and extension, home-reading union, v, 234-6; recent educational progress: England, Wales and Monmouthshire, Scotland and Ireland, v, 237-42; the reconstituted London University, v, 242-4; training in agriculture, v, 244-5.
- Education of girls**: importance of gymnastics, v, 245; general education, private tuition, day, boarding and endowed schools, v, 246-8; private, proprietary, and high schools, v, 249-50; polytechnic and public elementary schools, v, 251; final education: technical, university, and other institutions for advanced work, v, 251-6; supplementary education, scholarships, v, 256-8; Continental education in France, Germany, Austria-Hungary, Belgium, Italy, and other countries, v, 258-61.
- Eels**, adjuncts usually served with, iii, 121.
- Effleurage**, a form of massage, vi, 63.
- Eggs**, how to test, ii, 187; how to preserve, ii, 215-6; testing fertility, iii, 194; egg-and-breadcrumb, use of in cookery, iii, 91; scrambled eggs with asparagus, iii, 65; recipes for breakfast dishes—beaten and curried eggs, egg rissoles, eggs and tomato sauce, baked (eggs escalados, iii, 97-8; entrées (recipies), eggs à la crème, egg cutlets, eggs à la princesse, iii, 107-8; for invalids, vi, 103.
- Egg whisks**, ii, 173; sauce, iii, 37, 40; rissoles, iii, 98; cutlets, iii, 108; egg wine for invalids, vi, 110.
- Elder-down quilts**, laundry treatment, iii, 159.
- Ejectment of servants**, legal, ii, 104.
- Elbow-joint**, fractures near the, vi, 83; bandage, vi, 91.

- Elderberry wine**, ii, 233.
- Electric cooking appliances** (with illustrations), ii, 182, 183; flat-iron (illustration), iii, 148; bells, repairing of, iv, 238-40.
- Electricity**, as an illuminant, ii, 72; fitting up, lamps, etc., ii, 72-3; measurement of current, and cost, ii, 74.
- Embossing**. (See Home art work.)
- Embroidery**, decorative (illustrated), ii, 25-7; general directions: fabrics, working threads, tools, stitches, iv, 134-40; transferring designs, iv, 140-1; coloured embroidery—kinds of, shading, geometrical patterns, good and bad embroidery, pictures in embroidery, leek embroidery, iv, 141-6; drawn thread work and Tenebriffe embroidery, examples and designs, iv, 146-51; white work—stitches, designs, monograms, iv, 151-4; canvas work—single-thread canvas, stitches, edging canvas work, specimen, varieties of work, Penelope, Java, honeycomb, congress canvas, iv, 155-8; cross stitch—kinds, designs and uses, iv, 158-61; Russian cross-stitch, v, 161; appliqué—materials, onlaid and inlaid, specimen and designs, iv, 161-5; ribbon work: varieties, designs and uses, iv, 166-8; knick-knacks: pin-cushions, tea-cosies, lining bags and reticules, book covers, frames, caskets, wall-pockets, etc., iv, 168-73; knitting, iv, 173-9; crochet, iv, 179-87; various kinds of fancy work—English embroidery or "cut" work, satin stitch, guipure, drapery embroidery, tatting, Hardanger work, chenille embroidery, iv, 187-91.
- Emery-paper**, use of, iii, 148.
- Emigration**, information on choice of a career, vi, 2.
- Employers' liability**, ii, 90, 97, 99. (See Master and servant, law of.)
- Enamelling**, as an occupation for women, v, 138.
- Enamel paint**, i, 72.
- Endive**, culture of, iii, 210.
- Endowed schools for girls**, v, 247-9.
- Engineers**, information as to training, prospects, etc., vi, 12; mercantile marine appointments, vi, 18; naval appointments, vi, 19, 20.
- English china**, ii, 11.
- Engraving and etching**, training information, etc., vi, 8.
- Entailed estates**, granting of valid leases, i, 47.
- Entertaining**: general remarks, v, 1; visiting cards, v, 2; etiquette of paying and receiving calls, and of card-leaving, v, 3-6; invitations, v, 6-11; hints to host and hostess, v, 11-3; dinners, v, 13-8; table decoration and floral schemes, v, 18-25; evening receptions, v, 25-7; afternoon "at homes" and teas, v, 28; luncheons, v, 29-31; supper parties, v, 31; garden parties, v, 32-5; dances, v, 35-40; guests staying in the house, v, 40-3. (See also under special entries.)
- Entrées**, cooking instructions, recipes, and methods of serving, iii, 47-55; iii, 107-11. (See under special names.)
- Entry**, tenant's, date of, i, 56.
- Epicurean sauce**, ii, 222.
- Epilepsy**, treatment of, vi, 85.
- Escritoire**. (See Writing tables.)
- Estimates and prices for furnishing houses of various sizes**, i, 98-106; for floor-coverings, i, 118-20; for drawing-room furniture, etc., i, 145, 147, 149; for kitchen requisites, i, 177-8; for household linen, i, 192.
- Etching**, as a home occupation, v, 135.
- Etiquette** on social matters. (See Entertaining and names of social functions.)
- Euchre**, instructions for playing, vi, 198.
- "Euthermic" stove**, ii, 44, 45.
- Evening continuation classes and schools**, v, 234.
- Evening receptions**, general arrangements, invitations, menus, etc., v, 25-7.
- Evergreens**, varieties, iii, 229.
- Eve's pudding**, iii, 72.
- Examinations**, advantages in passing, v, 225.
- Excise license duties for male servants**, ii, 106.
- Excise officers and clerkships**, training information, vi, 10.
- Exercise**, outdoor and indoor for children, v, 181; importance of, in girls' education, v, 245; necessary for health, vi, 40.
- Expanders**, exercises with the, vi, 129-33.
- Expenditure**, household, estimates, iv, 44-5.
- Eyes**, care of the, hints and precautions, iv, 59-60; use of glasses, iv, 60; eyelashes and eyebrows, iv, 61; removal of foreign bodies and of lime, vi, 88, 89.

F

- Face-powders**, recipes and precautions, iv, 49-50.
- Facial massage**, iv, 48.
- Fainting fits**, treatment of, vi, 84.
- Fairy lamps**, ii, 72.
- Family medicine-chest**, contents and illustrations, vi, 50, 51.
- Family tool-chest**, contents and illustrations, iv, 218-30.
- Fancy work**, various kinds of, iv, 187-91. (See Embroidery.)
- Farmers**, training and educational facilities for, vi, 3.
- Fat**, its value in food, ii, 207-8; rendering down of, iii, 13; obesity, iv, 61.
- Faverolles (poultry)**, iii, 182.
- Feather buns**, iii, 120.
- Feathers**, washing and cleaning, iv, 90.
- Feeding-bottles**, best shapes, cleaning instructions and cautions, v, 170.
- Feet**, care of: bathing, treatment of cold feet, etc., iv, 55; corns, bunions, toe-nails, iv, 56-7; vi, 64, 65; treatment for bad-smelling, vi, 67.
- Felt carpets**, i, 114; felt (dress material), iv, 71; felt hats, cleaning, iv, 90.
- Fencing**, vi, 213.
- Fenders**, kitchen, i, 176; brass and marble, cleaning, ii, 121, 157.
- Fennel sauce**, iii, 37.
- Ferns**, for rockeries, iii, 224; for indoors, iii, 231; for greenhouses, iii, 234.
- Festoon blind**, i, 228-9.
- Fever hospitals**, vi, 53.
- Fever**, symptoms of various, vi, 67.
- Fibrin**, food constituent, ii, 208.
- Figure**, attention to, treatment of obesity and leanness, iv, 61-2.
- Filleting of fish**, process described, iii, 9.
- Filletts of mackerel**, iii, 42; of sole, iii, 45, 103, 104, 107; of pork, iii, 61; of beef, iii, 112; of veal, iii, 111; of whiting, iii, 104.
- Filters**, use of, i, 13.
- Final decoration of a house**: pictures, ii, 1-7; bric-à-brac, ii, 8-14; decorating wood-work, ii, 14-8; suggestions for amateurs, ii, 18-27; arrangement of plants in the house, ii, 27-36. (See under these headings.)
- Fire accidents**: precautions against fire, extinguishing fires, chimneys on fire, cost of employing fire-engine, fire insurance, ii, 56-8; treatment of burns and scalds, vi, 93.
- Fire-guard for kitchen** (illustration), i, 176.
- Fire-irons for drawing-room**, i, 146; for kitchen, i, 176; cleaning, ii, 120, 154.
- Fire-places**, artistic decoration, i, 89; for breakfast-room, i, 156; poker-work decoration, ii, 21; flowers and plants for, ii, 28; cleaning, ii, 120, 124, 154, 155. (See also Grates.)
- Fires**, open, advantages and disadvantages, ii, 37; how to light, ii, 41; economic use of firewood, iii, 124.
- "First aid"** in sickness or accident: anatomical relations and physiological functions of the body, vi, 78-80; arrest of bleeding, bleeding from the nose, ruptured varicose veins, lip wounds, simple cuts, fractures, dislocations, vi, 80-4; removal of the injured, vi, 94.
- Fish**: how to choose, ii, 187-8; list of, for each month, ii, 211-4; filleting process, iii, 9; cookery instructions and methods of serving, iii, 40-7, 103-5; breakfast recipes, iii, 96, 98, 99, 100; entrées, recipes, and methods of serving, iii, 105-6; cold fish dishes, iii, 106-7; adjuncts served with fish, iii, 121; carving, iv, 34; for invalids, vi, 104.
- Fishing**, general information, vi, 214-5.
- Fish-kettles**, i, 179; illustrations, ii, 170, 182; fish-sauce, iii, 99; fish soups, iii, 29, 30, 35, 36.
- Fits**, fainting, hysteria, apoplexy, epilepsy, and their treatment, vi, 84-5.
- Fives**, playing instructions, vi, 215.
- Fixtures in houses**, exempt from distress, i, 28; removable, i, 34-5; time for removal of, i, 35; express stipulation for, i, 36; law as to, in Scotland, i, 53.
- Flannel**, description and price of material, iv, 71; mending, iv, 81; washing, iii, 157-8.
- Flannelette**, description and price, iv, 71; dangers attending use of, v, 147.
- Flat-foot**, treatment of, vi, 68.
- Flats**, advantages and disadvantages of, i, 2-3; condition of stairs, i, 21; furnishing of: dining-room and drawing-room, bedrooms, hall and passage, i, 199-203; arrange-

ments for a small flat, i, 203-7; flats for occasional residents, i, 207; furnishing estimates, i, 103, 104-6; housekeeping in flats, ii, 143-8.

Flatulence. (See Dyspepsia.)

Flax plant, description and illustration, i, 194.

Fleas, how to destroy, iii, 133.

Fletcher gas-fire (illustration), ii, 45.

Flies, how to destroy, iii, 132.

Flock-papers, description and price, i, 78.

Floor-coverings: introductory, i, 109; ancient floorings, colour, Oriental carpets, i, 110; Axminster, Crompton Axminster, patent Axminster, and Brussels carpets, i, 111-3; Wilton, tapestry, velvet-pile, Kidderminster, Scotch, or ingrain, and felt carpets, i, 113-4; tests of quality, i, 114; Dutch, central squares, stair carpets, carpets under beds, i, 114; castor-grooves, under-coverings, floor-coverings for halls (linoleums and cork-carpeting), i, 115-7; cocoa-nut matting, staining, druggets, mats, i, 117-8; cost, i, 118-20; floorcloth, i, 165.

Floorings, artistic (tiled), i, 93.

Floors, hints about, i, 15; staining or painting, i, 85-8; draughty, i, 231; scrubbing, ii, 126, 154.

Floral decoration of dinner table, v, 25-5.

"Florentine" blind, i, 227, 228.

Flour, browned for cooking purposes, iii, 18.

Flower-garden, iii, 220-9. (See under Garden.)

Flower vases and pots, effective arrangement, ii, 28, 30, 34; illustrations, ii, 32, 33; v, 21.

Flowers, artificial, restoring and dyeing, iv, 91.

Flowers, cut: arrangement of, ii, 30; effective combinations, ii, 31; receptacles, ii, 32-4; wild flowers, ii, 34; for the fireplace, ii, 34; for the mantel-shelf, ii, 35; flowers grown specially for the house, ii, 35; suggested combinations for the seasons, ii, 36. (See also under Garden and Table decoration.)

Flues of kitchen range, ii, 174-7.

Flute, study of—music, price of instrument, etc., vi, 156.

Foie-gras, entrée recipe, iii, 51; West Indian, iii, 89; mock pâté-de-foie-gras, iii, 100.

Folding and mangling, instructions, iii, 155; folding and putting away of clothes, iv, 92.

Fomentations, use and application, vi, 60.

Food: for servants, law as to, ii, 89-90; food-allowances for servants, ii, 111-2; how to choose food, ii, 186-92; preserved provisions, ii, 192; preserving food by antiseptics, ii, 104-6; relative economy of different joints and foods, ii, 196-205; food values, ii, 205-9; advantage of mixed diet, ii, 209-10; food in season in each month, ii, 211-14; economy in buying food, iii, 124; proper food necessary for health, vi, 45-7; process of digestion, vi, 47, 79. (See also Larder.)

Food-passage, removal of foreign bodies in the, vi, 88.

Foot. (See Feet.)

Football, rules for playing, vi, 216.

Foot bandage, vi, 92.

Fore-arm, fractured, "first aid" treatment, vi, 83.

Foreign education, v, 233, 258-61.

Forks and spoons, various patterns, i, 182.

Fowl with ham (potted), ii, 219; hints for boiling, iii, 5; recipes, iii, 93, 94, 109, 114; adjuncts served with, iii, 121; time required for roasting, iii, 122.

Fowls, various breeds, iii, 178-80; for the table, iii, 181; combination breeds, iii, 182-6; foods and feeding, iii, 186-90; fowl-houses and pens, iii, 190-4; chicken-rearing, iii, 194-9; artificial hatching and rearing, iii, 199-201; diseases, iii, 201-3.

Fractures, treatment, bandages, etc., vi, 81-4.

Framing of pictures, ii, 3-4; cleaning of gilt frames, ii, 128, 158.

France, secondary and university education in, v, 258.

Franchise for women, iv, 9, 21.

Freckles, treatment of, iv, 50.

Freezing machines for ice cream, iii, 79-80.

French bread, iii, 20; buns, iii, 24; ice, iii, 80; beans, how to cook, iii, 66; how to grow, iii, 209.

French polishing, ii, 15; French-polished furniture, cleaning, ii, 129.

Friandises de Volaille, iii, 109.

Frieze decoration, i, 61-2, 83.

Frills, instructions for, iv, 121.

Fritadelles de faisan, iii, 51.

Fritters of veal, iii, 48; of pheasant, iii, 51; tomato, iii, 71; sausage, iii, 100.

Frost-bite, treatment for, vi, 87.

Frozen meat, remarks on, ii, 192; iii, 5.

Fruit in season for each month, ii, 211-14; iii, 212; good varieties, iii, 219; purchasing of, iv, 43; growing of, under glass, v, 123; orchard fruit, marketing, etc., v, 125. (See Garden.)

Fruit, bottled in syrup, 193, 227-9; syrups, ii, 229-30; cordials and wines, ii, 230-5; cakes, iii, 77; salad, iii, 78; stains, iii, 152.

Frying, methods of, iii, 9-11.

Frying-pans and baskets, i, 179; cleaning of, ii, 154.

Fuel, economy in, iii, 124.

Funeral arrangements, vi, 96.

Furnished houses, landlord's liability for condition of, i, 44; sub-letting, i, 49; letting, i, 52; rates and taxes, i, 58; for holiday accommodation, vi, 227.

Furnishing the house, general advice and hints, i, 97; estimates of cost, i, 98-101, 103-6, 119, 120; advice on hire system and on purchase of second-hand furniture, i, 101, 102; floor-coverings and estimates of cost, i, 109-120; hall, staircase and landings, i, 120-132; furniture for dining-room, i, 133-40; for drawing-room, i, 140-55; for breakfast-room, i, 155-8; for library, i, 158-63; for bedrooms, i, 163-72; for bath-room, i, 173-5; for kitchen, i, 175-80; for pantry, i, 181-9; furnishing of flats, i, 198-208.

Furniture, advice on purchasing second-hand, i, 102; instructions for packing and arranging for removals, i, 106-9; furniture brushes, i, 187, 188; slips for furniture and

hints for home upholstery, i, 234-40; spring-cleaning, ii, 154; furniture polish recipes, ii, 155; repairs, iv, 230-6.

Furs, for garments, trimmings, etc., iv, 71; cleaning and putting away, iv, 92.

G

Galantine of veal, iii, 58; with spinach, iii, 93.

Game, various kinds, with illustration, ii, 190; in season for each month, ii, 211-4; recipes for game dishes, iii, 62-5; game creams, game soups, iii, 31, 33; game entrées, iii, 51, 52; sandwiches, iii, 92; game pie, iii, 113; game breed of poultry, iii, 181; adjuncts served with, iii, 121; game creams for invalids, vi, 104.

Games, indoor: badminton, vi, 175; bagatelle, vi, 176; billiards, vi, 177-85; parlour quoits, ping-pong, vi, 185; skittles, vi, 186; backgammon, vi, 186; chess, vi, 187; dominoes, draughts, vi, 189; halma, reversi, solitaire, vi, 191; card games, vi, 192-206. (See Card games.)

Games, outdoor: archery, vi, 207; athletics—running, jumping, hurdle racing and steeplechasing, throwing the hammer, putting the weight, tossing the caber, walking races, records, vi, 207-9; bandy, baseball, bowls, boxing, vi, 209; cricket, vi, 210; croquet, vi, 211-3; curling, fencing, vi, 213; fishing, vi, 214; fives, vi, 215; football, golf, vi, 216-8; hockey, lacrosse, lawn tennis, vi, 218-21; quoits, rackets, ring-goal, vi, 221; rounders, rowing, vi, 222; shinty, skating, ski, swimming, vi, 223; tennis, tobogganing, wrestling, vi, 224.

Games, parlour. (See Parlour games.)

Gapes (poultry disease), iii, 197.

Garage, construction, etc., v, 65.

Garden: preliminary work, walks, edging, laying out, shrubberies, iii, 204; drainage, the lawn, iii, 205; paring and burning, trenching, seed-beds, clearing and digging, garden tools, appliances, manures, etc., iii, 206; inspection of garden, iv, 27.

Garden, flower: bedding plants, half-hardy annuals, hardy annuals, iii, 220; biennials, perennials, annual climbers, the growing of flowers, iii, 221; flowers for shady and sunny places, useful plants, some special beauties, flowers for smoky atmospheres, carpet bedding, iii, 222; garden flowers (illustration), iii, 222; a rockery and rockery plants, iii, 223-4; bulbs and tubers, pinks and carnations, iii, 224-5; roses, select varieties, iii, 226; chrysanthemums, flowering trees, perennial creepers and climbers, iii, 226-7.

Garden, fruit: proper succession of fruit, table of seasonal fruits for each month, iii, 212; planting of fruit-trees, mulching, pruning, iii, 213; training of trees, with illustrations of methods, iii, 214-7; stocks for fruit-trees, budding and grafting, iii, 217-8; strawberry culture, iii, 218; good varieties of fruit, iii, 219.

Garden, suburban: a garden of annuals, permanent gardens, to

hide wooden walls, wire arches, garden banks, screens, evergreens, iii, 228-9.

Garden, vegetable: succession of vegetables, cropping, culture, iii, 207; table of outdoor crops for each month, manuring, iii, 208-9; hints on vegetable culture, iii, 209-12.

Garden parties: invitations, dress, reception, and refreshments, v, 33; amusements, accommodation for guests, etiquette of leaving, v, 34-5.

Gardener-coachman, duties, etc., ii, 136-8.

Gardening, market: fruit under glass, vegetables, v, 123-5; fruit, flowers, seeds, v, 125-9.

Gardening, window: window boxes, a balcony, soil and flowers, iii, 230; indoor gardening, iii, 231.

Gas: payment of rates, i, 38; fires, ii, 44-5; as an illuminant, ii, 59; leakages and how to stop them, ii, 59-60; waste, ii, 60; wet and dry meters, ii, 61-2; jumping lights, ii, 62; fittings, globes, etc., ii, 62-4; burners, 64, 65; incandescent mantles, ii, 66; useful hints, ii, 66; pneumatic gas-lighting apparatus, ii, 67; stoves for heating, ii, 44-6; for cooking, ii, 178-81; boiling rings, ii, 181.

Gasaliers, ii, 63.

Gases, poisonous, suffocation by, treatment, vi, 87.

Gâteau à la Victoria (sweet recipe), iii, 116.

Gayonne recipe for ham-curing, ii, 216.

Gelatin in food, ii, 209.

General district rates, payment of, i, 38.

General servant, engagement and duties, etc., ii, 85, 138-41.

Gentlemen's dress clothes, folding of, iv, 92.

German cakes, iii, 24.

Germany, secondary and university education for women, v, 259.

Gervais cheese, iii, 174.

Gesso-work, for friezes, i, 62.

Geyser for heating bath (illustrations), i, 173; iv, 67.

Gherkins, pickled, ii, 220.

Giddiness, vi, 68.

Gifts at law, iv, 10-1, 19-20.

Gigot of lamb, iii, 58; of mutton, iii, 59.

Gilding woodwork, ii, 15-6.

Gift picture frames, cleaning, ii, 128, 158.

Ginger cordial, ii, 230; wine, ii, 233; naps, iii, 119.

Gingham, description and price of material, iv, 71.

Girls' dress. (See Dress.)

Girls' education. (See Education.)

Glass and china, hints on packing for removal, i, 108; kitchen crockery, i, 180; use of glass closet for checking breakages, i, 181; hints on choosing, hardening, and washing china, washing and mending glass, loosening stoppers, etc., i, 183-4; decorative glass, ii, 13; gas globes, ii, 63; basket for soiled plates, ii, 131; washing glass-ware, decanters, etc., ii, 132, 153; removal of paint, ii, 158.

Glasses (spectacles), use of, iv, 60.

Glaze and glazing, iii, 11, 17.

Globe-Wernicke book-cases (illustration), i, 159.

Globes, gas, ii, 63.

Gloves, mending, iv, 86; washing, cleaning, and renovating, iv, 89-90.

Glue, marine, for mending mackintoshes, iv, 92; for household repairs, iv, 222.

Goffering irons, iii, 147.

Gold-leaf, how applied, ii, 16.

Gold and silver threads for embroidery, iv, 136.

Golf, game of, instructions and requisites for playing (with illustrations), vi, 226-8.

Golf capes, making of, iv, 110 (plate G).

Goloshes, use and prices, iv, 95.

Good Friday, celebration of, hot-cross buns, etc., vi, 255.

Goose, adjuncts served with roast, iii, 121; time required for roasting, iii, 122; carving instructions, iv, 35.

Gooseberries, in syrup, ii, 228; good varieties, iii, 219.

Gooseberry jam, ii, 225, 226; jelly, ii, 226; wine, ii, 233.

Gourkha soup, iii, 32.

Governess, as a career for women-teachers, vi, 38.

Government office appointments. (See Civil Service.)

Grafting (hosiery, etc.), iv, 79-80.

Grafting and budding of fruit-trees, iii, 217.

Gramophone, description of mechanism, vi, 158-9.

Grapes, culture of vines, iii, 237.

Grates, inspection on choosing a house, i, 15-6; cost of fixing, i, 70; common defects of, ii, 38; proper construction, ii, 39; various types described, ii, 39-41; cleaning of, ii, 155.

Grease stains, removal of, ii, 127; iv, 87.

Green cream, iii, 84.

Greengage jam, ii, 226.

Greenhouse: heating and ventilation, cuttings, list of plants, iii, 231-5; cucumbers, tomatoes, forced rhubarb, and strawberries, iii, 235-6; vines, plants requiring more heat, iii, 237-8; pits and hot-beds, iii, 238.

Green-pea soup, iii, 34.

Green sauce, iii, 38.

Green-stained furniture for breakfast-rooms, i, 157.

Grenadine, description and price, iv, 72.

Groceries, arrangement in store-cupboard, i, 190; hints on purchasing, iii, 124; iv, 43.

Ground-rent, payment of, i, 41.

Grouse, advice on choosing, etc., ii, 190; roast, iii, 63; adjuncts served with, iii, 121; time required for roasting, iii, 122.

Guest-room, estimates for furnishing, i, 98, 100; for floor-coverings, i, 120; attendance of servants, v, 42-3.

Guests staying in the house: hints to host and hostess, tips, v, 40; shooting parties, week-end visits, informal visiting, invitations, v, 41; time of arrival and departure, meeting guests, etiquette of shooting or ball parties, management of guest-chambers, duties of servants, v, 42; legal position of guests, iv, 12.

Guinea-fowl, roast, adjuncts served with, iii, 121.

Guipure curtains, repair of, iv, 85; guipure lace, iv, 188.

Guitar, study of—price of instrument, etc., vi, 154.

Gumboil, treatment of, vi, 68.

Gum water, use of, iii, 150.

Gums, relaxed, recipe for, iv, 59.

Gymnastics, home: exercises without apparatus, hygienic, corrective, and educational, vi, 112-29; exercises with the expander, vi, 129-33; exercises with dumb-bells, vi, 133-7; Indian club exercises, vi, 137-42; wand exercises, vi, 142-5; Swedish system, v, 182; physical training for women teachers, vi, 37-8.

H

Haddock, how to cook, iii, 42; au gratin, iii, 104; adjuncts served with, iii, 121.

Hair, care of the, pomade recipe, iv, 62; falling hair, washes, brush and comb, dandruff, gray and superfluous hair, iv, 64-5.

Hairpin crochet work, iv, 185-7.

Hall: decoration, i, 65; furnishing estimates, i, 99, 103, 104; floor-coverings—linoleum, tiles, cork-carpeting, oil-cloth, i, 116-7; estimates for floor-coverings, i, 118; a passage hall and suggestions for its treatment, i, 120-2; a small square hall and its treatment, i, 122-3; an old-fashioned hall and its uses, furniture, etc., i, 123-5; extension of halls, i, 125; various suggestions, i, 126; decorative plants for halls, ii, 30; cleaning of tiles in hall, ii, 150; decoration of, for Christmas, vi, 250.

Hallowe'en parties, burning of nuts, etc., vi, 256.

Halma, instructions for playing, vi, 191.

Ham and bacon: various kinds of hams, ii, 201; a guide in ordering bacon, ii, 203; recipes for curing, ii, 216-7; potted, ii, 219; cookery instructions, iii, 5; boiled in champagne, iii, 86.

Hamburg hams, how cured, ii, 217.

Hamburgs (poultry), iii, 179.

Hand bandage, method of fixing, vi, 92.

Hand-seats for removal of injured persons, vi, 94.

Handicrafts, for women, vi, 33.

Hands: treatment for roughness and stains, swollen, chapped, and moist hands, iv, 52-3; the nails, manicure, chilblains, warts, iv, 53-4.

Handy-man, duties, wages, etc., ii, 136.

Hanging, suffocation by, treatment, vi, 87.

Hanging and fixing of wall-papers, i, 83-5; of pictures, ii, 5-7.

Hangings and textile fabrics, for wall coverings, i, 82.

Hardanger work, iv, 191.

Hares and rabbits: advice on choosing, ii, 191; when in season, ii, 211-4; potted hare, ii, 219; hare soup, iii, 30; adjuncts served with, iii, 121; time required for cooking, iii, 122; carving instructions, iv, 36.

Harlequin salade, iii, 89.

Harmonium, music for the, price of instrument, etc., vi, 155.

Harness, purchase and care of, v, 50.

Harp, music for, price of instrument, etc., vi, 154.

Hat-box for ladies' hats, description and illustration, vi, 228, 229.

Hatching (artificial) and rearing of poultry, iii, 199, 201.

Hats (silk and straw), cleaning and renovating, iv, 90.

Hawkers and gypsies, treatment of, iii, 130.

Hay fever. (See Cold in the head.)

Head bandage, how made and applied, vi, 90.

Headache, treatment of, vi, 68.

Health: necessity of regular exercise, vi, 40; sleep, vi, 41; prevention of disease, vi, 41; advantage of occupation and of a hobby, vi, 42; sanitary precautions—infection, disinfectants, flushing of drains, dust bins, care of sinks, ventilation, vi, 43-5; proper food, vi, 45-7; proper clothing, vi, 48-9.

Heartburn. (See Dyspepsia.)

Hearth, artistic decoration of, i, 89.

Heating: methods of diffusing heat, ii, 37; open fires, ii, 37-8; grates, ii, 38-41; how to light a fire, ii, 41; stoves, ii, 41-3; gas stoves and fires, ii, 43-6; oil stoves, ii, 46; hot-water pipes and radiators, ii, 46-52; hot-water supply, ii, 52-6; heating of bath-room, i, 173.

"Helioscene" blind, i, 226-7.

Hen-coops, best position for, iii, 195.

Hepplewhite furnished drawing-room, i, 143; furniture designs (illustration), i, 150.

Heritable property and the granting of valid leases, i, 21, 46.

Herrings, potted, ii, 219; in cases, iii, 87; baked, iii, 96; fried, iii, 98; in pastry, iii, 98; herring roes in paper cases, iii, 85.

Hiccough, treatment of, vi, 68.

Highway rates, payment of, i, 38.

Hoarseness, treatment of, vi, 68.

Hobby, advantage of, vi, 42.

Hockey, instructions for playing, vi, 216.

Holidays: introductory, vi, 225; country and seaside holidays—lodgings, boarding-houses, furnished houses, sea bathing, trunks, packing, where to go, vi, 225-31; holiday tours—general, British and Irish tours, foreign tours, sea voyages and cruises, vi, 231-5; walking tours, vi, 235-6; cycle touring, vi, 236-40; caravaning, vi, 240; camping (walking and cycling), vi, 241; mountaineering, vi, 243-8.

Holland, description and price of material, iv, 72.

Hollandaise sauce, iii, 38.

Home art work: metal embossing—tools and method, iv, 192-4; bent ironwork—tools, making and using scrolls, etc., iv, 194-6; leather embossing—tools and method, iv, 196-8; cane basket-work—tools and method of working, iv, 199-203; poker-work—tools, method, materials, iv, 203-5; marquetry painting—materials, method of work, v, 205.

Home dressmaking. (See Dress-making.)

Home gymnastics. (See Gymnastics.)

Home occupations for profit: bee-keeping, v, 112-7; journalism and literature, v, 117-22; market-gardening, v, 123-9; poultry rearing, v, 129-31; spinning and weaving, v, 131-3; art of illumination, v, 133; etching, v, 135; colour wood-blocks, v, 136; bookbinding, v, 137; metal-work and enamelling, v, 138-41; lithography, v, 141.

Home reading union, object of, v, 236.

Home upholstery, i, 234-40. (See Upholstery.)

Honey, harvesting and marketing instructions, v, 115.

Honey paste, iv, 52.

Hooks and eyes, sewing on of, iv, 86, 128.

Horse-radish sauce, ii, 222; iii, 38.

Horses: purchase of, good and bad points (illustration), warranty, etc., v, 45; treatment and care, proper food, etc., v, 47-50; iv, 29; purchase of a pony, v, 46.

Horticulture, a career for women, v, 252; training in, vi, 3.

Hosiery, mending of, iv, 78-81; knitting of stockings and socks, iv, 173-7.

Hospital nurses, social status, ii, 87; as a career for women, vi, 36.

Host and hostess, general hints to, v, 11.

Hot and cold water services, attention to, in choosing a house, i, 16.

Hot-beds (garden), iii, 238.

Hot-cross buns, vi, 255.

Hot-water pipes, arrangement, etc., ii, 46-50.

Hot-water supply, various systems described and illustrated, ii, 52-6.

Houdans (poultry breed), iii, 183.

House, choice of a: general considerations—town v. country, advantages and disadvantages compared, suburban, detached and semi-detached houses, flats, newly-built houses, importance of nice neighbours, former tenants, i, 1-3; situation—soil, elevation, aspect, plan, comfort of rooms, surroundings, i, 4-8; sanitary considerations—drainage, W.C.'s, soil-pipes, baths, lavatories, sinks, cess-pools, reports for leaking drains, sanitary report, water-supply, cisterns, wells, i, 8-13; condition of the premises—preliminary examination, roof, walls and ceilings, floors, doors, windows, grates, hot and cold water services, miscellaneous points, ventilation, i, 13-7; building a house—what to consider, title, by-laws, and restrictions, plans, water-supply, earth closets, bungalows, i, 17-8.

House decoration. (See under Decoration.)

House duty, payment of, i, 38.

House furnishing. (See under Furnishing.)

House parties. (See under Entertaining.)

Household accounts, iv, 40-5. (See Accounts.)

Household bread, iii, 20.

Household economy: mistress and servant, mistress and tradesman, lighting of house, iii, 123; fuel and food, iii, 124; kitchen and laundry economy, iii, 125; linen, clothing,

and other small economies, iii, 126-30; hawkers and gypsies, iii, 130; drapers' sales, iii, 130-2; prevention or destruction of vermin, iii, 132-5; hints on shopping, iv, 42-4; relative economy of different joints and foods, ii, 196-205.

Household repairs: the family tool-chest and its contents, iv, 218-30; repair of furniture, iv, 230-2; repair of door furniture: lock, keys, and door-handles, iv, 232; repair of window fittings—sash-lines, draughts, rattling windows, venetian blinds, iv, 233-6; miscellaneous repairs: water-taps, ball-cocks, electric bells, china and glass, iv, 236-40.

Housekeepers, lady, engagement of, ii, 83; social status, ii, 87.

Housekeeping in a flat, ii, 143-8.

Housemaid's box, cost and contents of, i, 189; ii, 120; dress, ii, 118; duties, ii, 118-33 (see under Servants); knee, treatment of, vi, 69; kneepad, ii, 126.

Hovis bread, iii, 19.

Howard's method of artificial respiration for drowning, iv, 86.

Humerus, fractured, "first aid" treatment, vi, 83.

Hungarian glass, ii, 14.

Husband and wife, law of (in England): making a will—intestacy, marriage settlements, wills, form and execution of a will, points to remember, codicils, iv, 1-3; husband's legal position—marriage and ownership, subsequent legislation, pledging credit, wife's agency, a wife's banking account, authority of the husband, mutual separation deeds, custody of children, iv, 3-8; wife's legal position—her present position, the franchise, iv, 8-9; gifts at law, *donatio mortis causa*, gifts defrauding creditors, iv, 10-1; divorce and matrimonial causes, iv, 11; legal position of guests, iv, 12.

Husband and wife, law of (in Scotland): making a will—*ius relictæ* and *ius relictæ*, legitim, dead's part, intestacy, marriage settlements, wills, holograph wills, points to remember, codicils, iv, 13-5; husband's legal position—*ius mariti*, subsequent legislation, husband's right of administration, his obligation to support his wife, wife's agency, authority of the husband, mutual separation deeds, iv, 15-8; wife's legal position, custody of children, iv, 18-9; gifts at law, donations *mortis causa*, donations between husband and wife, gifts in fraud of creditors, iv, 19-20; divorce and other consistorial actions, actions of separation and aliment, iv, 20-1; franchise, iv, 21.

Hussar pie, iii, 63.

Hypothec, landlord's right of, i, 54-5.

Hysteria, symptoms and treatment, vi, 69, 85.

I

Ice, to keep, vi, 98.

Ice-chest (refrigerator), use of (illustration), ii, 185; ice-cream freezing machine, iii, 79, 80.

Ice games: curling, vi, 213; skating, vi, 223; tobogganning, vi, 224.

Iced apple cream, iii, 82.

Iced fruit, compote of, iii, 81.
Ices, general instructions and recipes, iii, 79-80.
Illness of servant, ii, 116. (See Sickness, also names of ailments.)
Illumination, art of, as a home occupation, v, 133.
Illumination for special occasions, fairy lamps, night-lights, ii, 72.
Illustrating, training in, as a career, vi, 7, 28.
Impromptu plays for children, v, 266.
Incandescent gas lighting, ii, 63.
Incubators for hatching poultry and their management, iii, 199; incubators for babies, v, 152.
Indemnity, servants' claim to, ii, 90.
Indian army appointments, information regarding, vi, 6.
Indian civil service appointments, information regarding, vi, 12.
Indian club exercises, instructions and illustrations, vi, 137-42.
Indian ducklings, cookery instructions, iii, 63.
Indian marine (Royal) appointments, information, vi, 20.
Indian matting, for walls and dados, i, 82.
Indian muslin, iv, 72.
Indian police force appointments, information, vi, 7.
Indian rugs, i, 118.
Indian sauce, iii, 39.
Indigestion, vi, 67. (See Digestion of food.)
Indoor gardening, iii, 237.
Infants (legal) as masters or servants, ii, 87-8; as lessors, i, 22.
Infants, care of after birth, first things to be done, weighing and measuring, v, 152-4; care and management of, v, 160-74. (See under Baby.)
Infected houses or lodgings, liability for letting, i, 44.
Infection, sanitary precautions against, vi, 43.
Infectious disease, precautions in cases of, vi, 52.
Influenza, treatment of, vi, 69.
Ingrain carpets, i, 113.
Injured persons, removal of, vi, 94-5.
Injuries entitling servants to compensation, ii, 91-5; insurance against, ii, 95-7.
Ink stains on silver, removal of, i, 183; on cloth or carpet, etc., ii, 155; iii, 152; iv, 87.
Inland Revenue, tax for motors, v, 67; appointments, vi, 10.
Inlaying, process described, ii, 17.
Inquests, law regarding, vi, 96.
Insect bites, treatment of, vi, 94.
Insect pests, destruction of, iii, 132-3; infesting poultry, iii, 193.
Insomnia, vi, 71.
Inspectors of factories and mines, vi, 11; sanitary, vi, 22; appointments for women, vi, 33.
Insurance of houses, i, 51; fire insurance, rates, etc., ii, 57; against liability for accidental injury to servants, ii, 95-7, 116; principle and different methods of assurance, choice of an assurance office, policies, annuities, accident and burglary insurance, iv, 22-6.

Intestacy, legal effects in England, iv, 1; in Scots law, iv, 13.
Introductions, etiquette regarding, v, 12.
Invalid cookery: general principles and rules, vi, 97; convalescence, to keep cool dishes and drinks, to keep ice, washing of meat, reheating of food, seasonings, vi, 98-9; sweetening agents, raw beef balls, hints on beef-tea, remarks on bread, unfermented bread, vi, 100-1; celery, cereal puddings with eggs, chicken dishes, eggs, vi, 102-3; fish, game, creams, jellies, vi, 104-5; kedgeree, steamed pigeon, rusks, rusk pudding, rice pudding, vi, 106-7; sweetbreads, tapioca pudding with eggs, vermicelli pudding, vi, 108-9; beverages—apple-water, barley-water, bran tea, brandy custard, egg wine, lemonade, milk, toast-water, vi, 109-11.
Invalid nursing. (See Sickness.)
Invitations, general rules regarding, v, 6; invitations with forms and replies to balls, "at homes", weddings, dinners, and afternoon parties, v, 7-9; vi, 267; informal invitations, with specimen forms, v, 9; periods of notice given and usual hours for parties, v, 11; invitations to garden parties, v, 33; to dances, v, 35; for visits, v, 41.
Ironing of white clothes, iii, 155; collars, cuffs, and shirts, iii, 156.
Iron-mould stains, removal of, iii, 152.
Irons for kitchen, i, 180; for laundry-work, various kinds and how cleaned, iii, 147-8.
Irritant (corrosive) poisons, symptoms, and treatment, vi, 74.
Italian sauce, iii, 37.
Italy, educational facilities for women in, v, 260.
Ivory, how to clean, ii, 156.

J

Jaeger clothing, laundry treatment of, iii, 158.
Jalousies (shutter blinds), i, 226.
Jam roll (pudding), iii, 71.
Jams and jellies, general rules for making, ii, 223; recipes for various kinds, ii, 224-7.
Japanese leather-papers, i, 81; illustration, i, 82; screens, i, 232.
Japaned trays, cleaning of, ii, 156.
Java canvas, iv, 158.
Jaw, fractured, "first aid" treatment, vi, 82.
Jellied oranges, iii, 82.
Jellies, orange, iii, 78; celestial, iii, 80; pine-apple, iii, 95; lemon and coffee, iii, 114; claret, iii, 115; invalid cookery, vi, 105-6. (See also Jams.)
Jelly-bags, how cleaned, ii, 171.
Joints, relative economy of different, ii, 196-205.
Journalism and literature, as a home occupation—general remarks, v, 117; hints on how to begin, v, 117; how to obtain work, v, 119; illustrated articles, v, 120; remuneration, sending out MSS., v, 120-1; authorship, literary societies, v, 122; as a career, vi, 26; for women, vi, 33.

Jumping lights, cause of, ii, 62.
Jus mariti, right of, iv, 15.
Jus relictæ and jus relictî, rights of succession to movable estate, iv, 13.

K

Kabobs Écossais, recipe, iii, 51.
Kalmuc stair carpets, i, 132.
Kamptulicon, i, 116.
Kari Ste Claire (vegetable curry), iii, 68.
Kedgeree, for invalids, vi, 106.
Kennels for dogs, v, 89.
Kent's knife-cleaning machine, i, 186; combination mincer, ii, 218; ice-cream freezer, iii, 80.
Ketchup, recipes for making, ii, 222, 223.
Kettles (block-tin or iron) for various purposes, i, 179; how to clean, ii, 156; Brough's patent "lucky kettle" (illustration), ii, 170; for electric cooking (illustration), ii, 182.
Kidderminster carpets, i, 113.
Kidneys, recipes for breakfast dishes, iii, 97, 99.
Kiltings, how made, iv, 122.
Kimono coat, instructions for making, iv, 105 (illustration, plate A); kimono braces (illustration), iv, 121.
Kindergarten schools, v, 223.
Kitchen: estimates for furnishing, i, 100, 105; furniture, i, 175; floor-covering, fender, clock, curtains, list of utensils and requisites with prices, i, 176-80; spring-cleaning of, ii, 150; kitchen with double-oven range (illustration), ii, 165; kitchen fitted for cooking by electricity, ii, 183; kitchen economy, iii, 125.
Kitchen-garden, iii, 207-12. (See Garden (vegetable).)
Kitchen-range, management, various types described and illustrated, ii, 174-8.
Knee fractures, treatment of, vi, 84; bandage, vi, 92.
Knife-sharpener and knife-cleaning machine (illustrations), i, 185, 186; ii, 142.
Knitting: stockings and socks, shooting or golf stockings with fancy top, silk sock, silk tie, lady's mitten, iv, 173-9.
Knives, how to sharpen and clean, i, 185-6; ii, 142; to fasten loose handles, i, 186; garden knives for pruning and budding, iii, 206.
Kromeskies, batter for, iii, 16; cookery instructions, iii, 47, 48.

L

Lace, crochet-work, instructions and illustrations, iv, 180-4; cleaning and washing, iii, 162; iv, 89.
Lace and muslin curtains: advice on choosing, i, 210; hints for making and draping (with illustrations), i, 217-21; cleaning, i, 221; tinting of, iii, 162; mending of, iv, 84.
Lacquer for brass-work, ii, 251; cleaning of lacquered brass-work and ornaments, ii, 151, 156.
Lacrosse, instructions for playing, vi, 218.
Lactometer for testing milk, ii, 186.

Lady helps and housekeepers, engagement, position, etc., ii, 83.

Lamb, how to choose, ii, 189; best joints, ii, 200; when in season, ii, 211-4; cookery instructions and methods of serving, iii, 58, 60, 122; carving, iv, 34.

Lamps, various kinds, spirit, colza, and petroleum, ii, 67; precautions against explosions, ii, 67; burners, ii, 68; choice of, ii, 68-70; petrolite lamp, ii, 70; care of, ii, 70; accidents, ii, 71; lamp oil, ii, 71; fairy lamps and night-lights, ii, 72; electric lamps, ii, 73; cleaning of, ii, 156; lamps for kitchen, i, 180; for bicycles, ii, 76; v, 61.

Lancers, dancing instructions, vi, 172.

Land agents, vi, 3.

Land surveyors and valuers, training information, etc., vi, 4.

Land tax, payment of, i, 37, 38.

Landlord and tenant, law of (in England): different kinds of tenancy, i, 10-20; leases and agreements, i, 20; who may grant valid leases, i, 21; specimen forms of lease, i, 23-4; repair and maintenance: waste, tenant's liability to repair, covenants to insure and to repair, i, 24-6; landlord's right to distress: time for levying, arrears recoverable, things privileged, where it must be made, mode of making, sale of property taken, remedies for unlawful distress, security for rent, agents and receivers of rent, bankruptcy of tenant, distress a waiver of landlord's right of re-entry, expenses allowed for distress, landlord's claim when tenant's goods are taken for debt, i, 27-34; fixtures—law as to, time for removal, fixtures in case of distress stipulation, i, 34-6; covenant to pay rent, i, 35; taxes: for tenant and landlord, tenant's taxes in absence of stipulations, payment by outgoing or incoming occupier, landlord's taxes in absence of stipulation and in case of express stipulation, i, 37-40; subletting, i, 40; good title and quiet enjoyment, i, 41; determination of tenancies: by notice, by surrender, by forfeiture, tenants quitting during their term, i, 41-4; landlord's liability for condition of furnished house, i, 44; letting of infected houses or lodgings, i, 44; rights of lodgers, i, 45.

Landlord and tenant, law of (in Scotland): the lease, i, 46; who may grant valid leases, i, 46-7; how a lease is constituted: the foundation of a lease, stamping, i, 47; form of lease of dwelling-house, i, 48; subletting and assigning, i, 49; tenant's rights under a lease: possession, accidental injury or destruction, injury by fire, insurance, i, 49-51; tenant's obligations: to take and retain possession, payment of rent, management, i, 51; repairs, i, 52; furnished houses, i, 53; fixtures: right to remove, i, 53; landlord's remedies for recovery of rent: summary diligence, action of mails and duties, hypothec, landlord's right to retain tenant's furniture, sequestration for rent, landlord's right in competition with other creditors, i, 53-6; entry, date, i, 56; breaks, i, 57; removing: warning, notice by tenant, tacit relocation, i, 57-8; rates and taxes, i, 58; stamp duties on leases, i, 58.

Langhans (poultry breed), iii, 183.

Larder: introductory—conditions and fittings, ii, 184-5; how to choose food: milk, butter, eggs, fish, beef, veal, mutton, lamb, venison, pork, game, poultry, ii, 186-91; British and foreign meat compared, i, 191; preserved provisions, ii, 192; preserving food by antiseptics—salting meat, smoke-cured provisions, ii, 194-6; relative economy of different joints and foods, methods of jointing a bullock (illustration), best joints of beef, lamb, mutton, pork, veal, venison, ii, 196-203; food values: the purpose of food, digestion, need and proportion of water in different foods, inorganic foods, organic foods—heat-giving (starch, sugar, fat), flesh-forming (albumen, fibrin, casein, gelatine), ii, 205-9; advantage of mixed diet: amount of food for an average healthy man, proportion of organic constituents in food-stuffs, diet based on digestibility, ii, 209-10; food in season in each month, ii, 211-4.

Larding, process described, iii, 12.

Laudanum, poisoning by, vi, 76, 77.

Laundry work: economic hints, iii, 125; general arrangements—care of soiled clothes, marking linen, counting clothes, lists of linen, airing linen, mending linen, laundry and home washing compared, iii, 136-40; utensils—washing-machines, wringing-machines, mangles, cleaning of these, tubs, boilers and how to clean them, irons, and how to clean them, iii, 141-8; washing materials—water (a modern laundry—illustration), soap, starch (cold and hot-water), blue, gum, and bran water, iii, 148-50; preparation for washing-day, iii, 150; removal of stains—tea and coffee, fruit and wine, iron-mould, ink, paint, mildew, iii, 151-2; starched and non-starched clothes, iii, 152-3; tinting, iii, 153; white clothes: steeping, washing, boiling, bleaching, rinsing, blueing, starching, drying, folding and mangling, ironing, iii, 153-5; collars, cuffs, and shirts: starching, ironing, polishing, folding, iii, 155-7; flannels, etc., coloured and embroidered, shawls, stockings, blankets, eider-down quilts, iii, 157-9; prints: washing, rinsing, ironing, velvet, iii, 159-60; silk: washing, rinsing, ironing, iii, 160; muslin: washing, starching, drying, ironing, iii, 160-1; curtains: washing, boiling, starching, drying, tinting, iii, 162; lace and chiffon, how treated and ironed, iii, 162; blouses: washing and ironing, iii, 163; sun-bonnets, how washed and ironed, iii, 164; paraffin washing, iii, 164.

Lavatories, i, 9-10.

Law agents, information regarding, vi, 16.

Lawn tennis, instructions and requisites for playing, vi, 218-21.

Lawyers, training information, prospects, etc., vi, 15-7.

Laying the table, instructions, v, 18.

Leakages in gas fittings, how detected and stopped, ii, 59-60.

Leanness, treatment of, iv, 62.

Leases, law as to (in England), i, 20-4; in Scotland, i, 46-50. (See under Landlord and tenant.)

Leather papers (Japanese), i, 81;

panels for walls, i, 92; leather-covered chairs, dusting of, ii, 129; leather embossing, iv, 196-8.

Leek embroidery, instructions and designs, iv, 144-6.

Leg fractures, etc., treatment and bandages for, vi, 84.

Legal profession, information regarding training, prospects, etc., vi, 15-6.

Leghorns (poultry), iii, 79.

Legitim, right of, iv, 13.

Leisure of servants, how to improve, ii, 112-3, 115.

Lemonade, portable, ii, 194; for invalids, vi, 110.

Lemon pudding (cold), iii, 72; jelly, iii, 114; vi, 105; rings, iii, 119; em brocation for freckles, iv, 50-1.

Lentil soup, iii, 31.

Lessons for young children, hours and arrangements, v, 180.

Letters. (See Correspondence.)

Lettuce salad, iii, 90; culture of, iii, 210.

Librarian appointments, information as to, vi, 27; for women, vi, 34.

Library: furniture—book-cases, writing-table, wall decorations, carpets, and curtains, heat and light, i, 65, 76; 158 62; requirements for a larger library, i, 162-3; estimates, i, 99; management—books, book-cases and shelves, library appliances, care, binding and purchasing of books, book-clubs, book-plates, etc., iv, 207-11.

Licenses, excise, for male servants, ii, 106; marriage license, vi, 263.

Life policies, iv, 24. (See Insurance.)

Life-preserver, precaution against burglary (illustration), iv, 27.

Lighting: methods, relative cost, lamps and ceilings, accessories, ii, 58; coal-gas, ii, 59-57 (see Gas); lamps, ii, 67-72 (see Lamps); electricity, ii, 72-5; acetylene and air gas, ii, 75-6; economic hints, iii, 123, 124.

Lignomur for ceilings, prices and illustration, i, 81, 82.

Lime-wash, how prepared, i, 75.

Lime-water, use of, v, 169.

Lincrusta for friezes, etc., description, prices and illustration, i, 82, 83.

Linen cupboard: arrangement and list of contents in, i, 191; marking linen, quantity needed (list and estimate), i, 192; new linen from old, origin of linen, various kinds, i, 193-5; linen and cotton compared, origin of cotton, tests of quality, prices, i, 195-6; wear and repair, blankets, tests of quality, i, 197; protection from moths, use of perfume, i, 198; sorting of linen for the wash, ii, 133; economical hints, iii, 126; lists of linen (for laundry), airing and mending, iii, 138, 139. (See under Laundry work.)

Linen materials: holland, iv, 72; tests of quality, iv, 75, 76; mending instructions, iv, 83-5; linen for embroidery purposes, iv, 135.

Linoleum: cost of laying, i, 69; description, prices, etc., i, 116; estimates for furnishing requirements, i, 99, 100, 101, 103, 104, 106; how to clean, ii, 126.

Lip wounds, first aid treatment, vi, 81.

Literary societies, membership of, v, 122.
Literary work. (See Journalism and literature.)
Lithography, as a home occupation, v, 141; training in, vi, 8.
Liver disease in poultry, iii, 201.
Liverpool china, ii, 10.
Lobsters, testing of, ii, 188; lobster soup, iii, 29; entrée dishes, iii, 47, 51; adjunct served with lobster cutlets, iii, 121.
Local government board, appointments, vi, 11.
Locks and keys, repairing of, iv, 232.
Locomotion: riding and driving, v, 44-54; cycling, v, 54-63; motors and motoring, v, 63, 67. (See under these entries.)
Lodgers' rights, i, 45.
Lodgings, liability for letting infected, i, 44; for holidays, vi, 225.
London county council, clerkship appointments, vi, 12.
London University, matriculation examination, v, 225, 231; reconstitution of, v, 242-4; metropolitan colleges in connection, v, 253.
Loe, instructions for playing, vi, 198.
Luggage, passenger's, information on railway conveyance, vi, 230.
Lumbago, treatment of, vi, 69.
Luncheon cake, recipes, iii, 25, 119.
Luncheon parties, etiquette and menus, v, 29; service, wines, decorations, v, 30-1.

M

Macaroni with capers, iii, 87; croquettes, iii, 108; au gratin, iii, 109.
Macaroons and cream, iii, 75, 81.
Macédoine of fruits, iii, 116.
Mackerel, advice on purchasing, ii, 188; when in season, ii, 211-4; potted, ii, 219; how to cook and serve, iii, 42; adjuncts served with, iii, 121.
Mackintoshes, material, iv, 72; cleaning and brushing, iv, 91; glue for mending, iv, 92.
Madeira sauce, iii, 37; cakes, iii, 120.
Mahogany furniture, suitable for dining-room, i, 65; cleaning and dusting, ii, 129, 154, 155.
Maids of honour, iii, 77.
Mail-carts for babies, v, 173.
Mails and duties, action of, for recovery of rent, i, 53.
Maitre d'hôtel butter sauce, iii, 39.
Male servants, excise licenses for, ii, 106; page boys and their duties, ii, 124-6; the handy man and the coachman-gardener, ii, 126-8.
Mandoline, music for, price of instrument, etc., vi, 155.
Mangles, description, prices, cleaning instructions, iii, 143-5; mangling of clothes, iii, 155.
Manicure, requisites for hands and nails, iv, 53-4.
Mannheim breads, iii, 21.
Mantel-piece, how to treat an ugly, i, 88; drapery for mantel boards, i, 224.
Mantles, incandescent, ii, 66.
Manures for gardens, iii, 207, 209.
Manuscripts for the press, hints as to, v, 121.
Marble, how to clean, ii, 127, 156-7.
Marble cake, recipe, iii, 25.
Marinading, method of salting, ii, 195; iii, 12.
Marines (Royal), information on choice of a career, vi, 17.
Market-gardening for profit: fruit under glass, vegetables, fruit, flowers, seeds, v, 123-9.
Marketing, instructions for choosing food, ii, 186-91; iii, 124; of dairy produce, iii, 177. (See Larder.)
Marking of linen, i, 192; for laundry purposes, iii, 137.
Marmalade, orange, recipes, ii, 226, 227.
Marmosets, care and treatment, v, 109.
Marquees for wedding receptions, etc., cost of hire, vi, 268.
Marquetry painting, materials, method of work, etc., iv, 205.
Marriage, preparations, etc., for a wedding. (See Wedding.)
Marriage contract, various forms of, in England: before the registrar, by banns, by license (ordinary and special), mixed marriages, marriage with a foreigner, vi, 263-4; in Scotland—regular marriage and registration, irregular marriages and registration, vi, 265-6.
Marriage settlements, iv, 1, 14 (see Husband and wife, law of); preliminary arrangements, vi, 266.
Married women as lessors, i, 22, 46; as servants, ii, 88.
Married women's property acts, and their effects, i, 22, 46; iv, 3-5, 8, 15, 16.
Marrows, culture of, iii, 210.
Marshall Hall's method for restoring respiration, iv, 86.
Marsh-mallow syrup, ii, 229.
Marzipan (marchpane), iii, 25.
Massage, use of, and instructions for, vi, 62-3.
Master and servant, law of: introductory, domestic and menial servants distinguished, infants as masters or servants, married women as servants, duration of the contract, ii, 86-8; rights and duties: wages, food, clothing and lodging, servant's claim to indemnity, right to compensation for injuries, amount of compensation, redemption of weekly payments, settlement of claims by arbitration, recording the agreement, notice of accident, casual servants, contracting out disallowed, application of the Workmen's Compensation Act of 1906 to servants in the employment of the Crown, insurance against liability for accidental injury to servants, window cleaning, ii, 88-97; master's liability for servant's contract: by adoption, by express authority, by implied authority, ii, 97-9; master's liability for servant's wrongful acts: servant's crimes and civil wrongs, common employment, ii, 99; criminal offences committed by the servant: the search of servants' boxes, servant's gifts of master's property, ii, 100-1; determination of the contract: by death of either party, by notice, by dismissal for wrongful conduct, ejectment of servant, damages for wrongful dismissal, servant's character, ii, 101-6; excise licenses for male servants, ii, 106; practical advice as to contracts, ii, 107.
Master's duties: insurance, iv, 22-6; care and inspection of premises, iv, 26-31; carving, iv, 31-7.
Materials, dress, classes and kinds of, iv, 69, 70-4; tests for different materials, iv, 74-6; advice on purchase of, iv, 69. (See entries for special names of material.)
Maternity nurse, engagement of, v, 158.
Matronship appointments in institutions and schools, vi, 34.
Mats for floors, i, 118; for bathroom, i, 174.
Matting for walls, i, 82, 92; for bedroom floors, i, 166; cleaning instructions, ii, 157.
Mattresses, i, 168.
Mayonnaise sauce, iii, 39; and salmon, iii, 45.
Meal, suitable, for poultry, iii, 187.
Meals, arrangements, etc., for servants, ii, 111; for the family, ii, 164-6; for young children, v, 178-80.
Meat: wire meat-covers, i, 180; instructions for choosing, ii, 188-90; British and foreign meat compared, ii, 191; potted meat, ii, 193, 218; preserving meat by antiseptics, salting, etc., ii, 194; best joints, ii, 198-205; seasons for, monthly list, ii, 211-4; Australian meat, ii, 218; cookery instructions, iii, 56-62; approximate time for baking and roasting, and proportionate waste in cooking meat, iii, 122; washing of, vi, 99.
Medical attendance for servants, ii, 90, 116; choice of a doctor, etc., vi, 53.
Medical profession, information as to study, examinations, appointments, etc., vi, 17; for women, vi, 35.
Medicated baths, iv, 67.
Medicine chest, family, list and uses of contents, vi, 50-2.
Medicine stains on silver, removal of, i, 183.
Medicines, patent, use of, vi, 62.
Melon cream, iii, 176.
Men servants. (See Male servants.)
Mending and darning, iv, 76-87. (See Dress, choice and care of.)
Menu-cards, v, 22.
Menus, for dinner, v, 14-7; for evening parties and receptions, v, 26-7; for afternoon "at homes", v, 28; for luncheons, v, 29; for supper parties, v, 31.
Mercantile marine, appointments, etc., vi, 18.
Merino, description and price, iv, 72.
Metal embossing, iv, 192-4.
Metal work, amateur, ii, 23-4.
Meters, gas (wet and dry), and how to read them, ii, 61.
Metronome, description and illustration, vi, 150.
Metropolitan Asylums Board, clerkships, appointment information, vi, 11.
Mice, prevention or destruction of, iii, 133.
Mildew, removal of, ii, 157; iii, 152.
Milk, means of testing, ii, 186; use of skimmed milk, iii, 176; proper

keeping of, iii, 177; use of, in baby feeding, v, 164-5; condensed milk, v, 169; for invalid diet, vi, 110-1.

Milk punch, ii, 23; puddings, v, 102, 107, 108, 109.

Millers, training information, vi, 4.

Millinery, hat cleaning, iv, 90; for young children, v, 196-9; as a career for women, vi, 36.

Minced beef, cookery instructions, iii, 57.

Mince-meat, for Christmas, v, 254.

Mincing-machine, description and illustration, i, 180; ii, 218.

Minorcas (poultry breed), iii, 180.

Mirrors, decorative, i, 90; how to clean, ii, 128, 157.

Mistress and servant, relations between, ii, 112; mistress and tradesman, household economy hints, iii, 123.

Mistress's duties: duties daily, weekly, and at longer periods, iv, 38-40; orders for the day, keeping of accounts, iv, 40; cash & credit, weekly or monthly payments, checking of bills, iv, 41; practical hints on shopping—vegetables, fruit, groceries and general stores, drapery and clothing, estimates of expenditure, iv, 42-5.

Mitten, lady's, pattern, iv, 178.

Monkeys as pets, treatment of, v, 109.

Monograms, embroidered, iv, 154.

Morning room, illustration of, j, 171.

Mortgaged houses, grant of valid lease, i, 22, 46.

Mosaic flooring, description and use, i, 93-4, 110.

Moths, protection of clothes, blankets, etc., from, i, 198; prevention and destruction of, iii, 132.

Motors and motoring: selection of a car, v, 63; tyres, garage, petrol, v, 64-5; legal aspects—registration, driver's license, revenue tax, v, 66-7.

Moulds, jelly, specimens, ii, 172.

Mountaineering, information regarding, vi, 243-8.

Mouse-traps (illustration), iii, 134.

Muffins, iii, 21.

Mulberry wine, ii, 234.

Mulching, how done, iii, 213.

Mullet, cooking instructions and methods of serving, iii, 42, 43, 104.

Mulligatawny soup (clear), iii, 102.

Mumps, treatment of, vi, 69.

Muraline wall-paper, description and price, i, 78.

Museum assistants, information regarding, vi, 11.

Musgrave's stove (illustration), ii, 42.

Mushroom-ketchup, ii, 222.

Mushrooms, cookery instructions, ii, 68, 87, 91.

Music: introductory, iv, 146; singing, vi, 146; the pianoforte, vi, 147-52 (see *Pianoforte*); violin, viola, violoncello, harp, guitar, vi, 153-4; mandoline, harmonium, American organ, flute, oboe, clarinet and bassoon, vi, 155-6; brass instruments, vi, 156; banjo, zither, vi, 157; concerted music, vi, 157; mechanical appliances—gramophone, pianola, etc., vi, 158-61.

Music-hall artists, engagement and prospects, vi, 22.

Music teaching, training information, etc., vi, 19; for women, vi, 35.

Musical box, description of mechanism, vi, 160.

Muslin, laundry treatment of, iii, 161; description of material, iv, 72; putting away of muslin garments, iv, 92.

Mutton, how to choose, ii, 189; best joints, ii, 200; digestibility, ii, 210; season for, monthly list, ii, 211-2; recipes and methods of serving, iii, 58, 59, 60; adjuncts served with cooked mutton, iii, 120; approximate time for roasting and proportionate waste in cooking, iii, 122; carving instructions (with illustrations), iv, 32-4.

N

Nails, treatment of the, iv, 53-4.

Nails and nail-punches for household repairs, iv, 223-4.

Napoleon (or Nap), instructions for playing, vi, 199.

Nasturtium pickles, ii, 221.

Navy, choice of a career in, appointment information, etc., vi, 19.

Neapolitan stewed steak, iii, 56.

Neck-bands for dresses, making instructions, iv, 114.

Nectarines, good varieties, iii, 219.

Needlework, as a career for women, vi, 36.

Nesselrode (sponge-cake) pudding, iii, 74.

Nests for hatching poultry, iii, 194.

Neuralgia, treatment of, vi, 69.

New Year, observance of, vi, 255.

Newly-built houses, precautions, i, 3.

Newspaper advertisements for servants, ii, 79.

Newspaper staff: choice of a career, information as to training, vi, 26-7.

Night sweats (consumption), vi, 65.

Nose: methods of arresting bleeding, vi, 8; removal of foreign bodies, vi, 88.

Notary, information regarding, vi, 16.

Nun's veiling, description and price, iv, 72; washing, iii, 158.

Nursery, wall-papers, floor coverings, curtains, etc., suitable for, i, 66; "Salubra" paper, i, 81; precautions against fire accidents in, ii, 56; choice of a room, attention to pure air and ventilation, temperature, precautions as to floors, fire-places, lights, etc., v, 149-52.

Nurses, children's: duties and character, ii, 84; qualifications, etc., v, 157-9; vi, 30; male nurses, vi, 18; importance of trained nurses for the sick-room, vi, 61.

Nursing the sick, as a career, training information, vi, 36.

Nut cake, recipe, iii, 25.

O

Oak panelling, cost of, i, 96; furniture for dining-room, prices, etc., i, 133-4; cleaning of, ii, 157.

Oatmeal fish-sauce, iii, 99.

Obesity, treatment of, iv, 61.

Oboe, music, price of instrument, etc., vi, 156.

Occupations and the choice of a career: home occupations for profit, v, 112-42 (see under *Home occupations*); appointments for men, vi, 1-27; for women, vi, 27-39 (see names of special occupations); advantage of, for health, vi, 42.

Oil, burning, how to extinguish, ii, 57; suitable for lamps, ii, 71.

Oil-cloth, description and use, i, 127; cleaning, ii, 128.

Oil lamps (spirit, colza, petroleum), ii, 67; precautions against explosions, ii, 67, 71; choice and care, ii, 68-70; lamp oil, ii, 71.

Oil paint for wall-covering, i, 76.

Oil-stoves, for heating, ii, 46; for cooking, ii, 181.

Omelets, Canadian, iii, 97; omelette soufflé, iii, 99.

Onion sauce, iii, 40; onion tortilla, iii, 99.

Onions, pickled, ii, 221; use of burnt onions, iii, 17; adjuncts served with cooked onions, iii, 121; good varieties, culture, etc., iii, 209, 210.

Opium, poisoning by, treatment, vi, 76, 77.

Orange marmalade, ii, 226, 227; syrup, ii, 230; gin, ii, 230; wine, ii, 231; sauce, iii, 39; jelly, iii, 78; vi, 106; cream soufflé, iii, 83; salad, iii, 90.

Oranges, jellied, iii, 82; mousse d'oranges, and oranges à la Russe, iii, 115.

Organ, American, study of, prices of instrument, etc., vi, 156.

Organic foods, heat-giving, ii, 207; flesh-forming, ii, 208.

Oriel windows, curtains for, i, 214.

Oriental blinds, i, 227; carpets, i, 110; china, ii, 12.

Ornaments, silver, cleaning, i, 183; cleaning of brass, ii, 151, 156.

Orpingtons (poultry breed), iii, 182.

Ortolan, specimen (illustration), ii, 190.

Osram electric lamp, ii, 73.

Ottoman for flat furnishing, i, 207; home-made, iii, 128.

Oven, electric cooking (illustration), ii, 182; oven pan with stand (illustration), iii, 3; regulation of, for baking, etc., iii, 2-4. (See also *Kitchen ranges*, also *Stoves*.)

Overmantel space, decoration of—mirrors, pictures, etc., i, 90, 91; overmantels for drawing-room (illustration), i, 152-3.

Ox-tail soup (clear), iii, 31.

Ox tongue (potted), ii, 219; à la Parisienne, iii, 120.

Oyster and celery salad, iii, 90; fritters, iii, 87; sauce, iii, 39; soup, iii, 33, 34; toasts, iii, 84.

Oysters, advice on purchasing, ii, 188; when in season, ii, 211, 213-4; cookery instructions, iii, 43-4; savoury recipes, iii, 84, 86, 87; entrée recipes, iii, 105.

P

Packing, hints and suggestions, i, 108; utilization of packing cases, iii, 129; packing of trunks, boxes, etc., vi, 229.

Page boys, ii, 134; outfit and duties, ii, 134-6.

Pages at a wedding, costumes, etc., vi, 267.

Paint: cleaning painted woodwork, ii, 127; ii, 127; removal of from glass, ii, 128; removal of smell, ii, 128; removal of stains, iii, 128; iv, 87.

Painting: preparing the wood, cleaning old work, removing old paint, applying paint, enamel paint and porcelain, i, 70-2; artistic painting on wood, ii, 17; amateur decorative painting, hints and suggestions, ii, 18-21.

Padana, use and preparation of, iii, 16, 18.

Pans: list and prices of pans for kitchen use, i, 177-9; care of metal and earthenware pans, ii, 170-1; illustrations of various kinds, ii, 170, 173; electric cooking apparatus, ii, 182.

Pantry: arrangements, i, 181; glass closet, pantry register, cleanliness, i, 181; silver and silver plate, i, 182; glass and china, ii, 183-5; table cutlery, i, 185-6; brooms and brushes, housemaid's box, step-ladder, etc., i, 186-9; furnishing estimate, i, 100.

Paper, waste, disposal, iii, 127-8.

Paper patterns, iv, 99-103. (See Dressmaking.)

Papering walls, (See Wall-coverings.)

Paraffin lamp for use of painters, i, 71; use of paraffin in washing, iii, 164.

Parcels, postal regulations, iv, 213.

Parlour games for children, v, 209-14.

Parlour-maid, general duties, ii, 119.

Parlour quilts, instructions for playing, vi, 185.

Parmesan sauce, iii, 39.

Parquetry for flooring, i, 63, 96.

Parley or fennel sauce, iii, 37.

Partridges: advice on purchasing, ii, 190; season for, ii, 211, 213, 214; cookery instructions, iii, 64; adjuncts served with, iii, 121; time required for roasting, iii, 122; carving, iv, 37.

Paste for fixing wall-papers, i, 84; for scrap-books, iv, 215.

Pastry making, general instructions and recipes, iii, 26-8.

Patching. (See Mending and darning.)

Pâté-de-foie-gras, iii, 51, 89, 100.

Patent agents, information regarding, vi, 16.

Patent medicines, use of, vi, 62.

Patent office examiners, appointment information, vi, 11.

Peaches brandied, ii, 228; pickled, ii, 228; à la Patti, iii, 116; good varieties, iii, 219.

Pears in syrup, ii, 228; good varieties, iii, 219.

Peas, how to boil, iii, 6; devilled, iii, 68; adjunct served with, iii, 121; culture, iii, 210; good varieties, iii, 209; pea-soup, iii, 34.

Perambulators, described and illustrated, v, 173.

Perennials, varieties, iii, 221; perennial creepers and climbers, iii, 227.

Perfume, useful for linen cupboard, i, 198.

Perquisites of servants, ii, 114.

Persian (Gombroon) pottery ware, ii, 12-3.

Personal injuries to servants, ii, 91-7.

Perspiration, excessive, treatment of, iv, 51.

Petrol, storage regulations, v, 65.

Petroleum lamps, ii, 67.

Petrolite lamp, ii, 70.

Petrisage, a form of massage, vi, 63.

Pets, domestic. (See under Domestic.)

Pheasants: advice on purchasing, ii, 190; when in season, ii, 211, 213-4; potted, ii, 219; cookery instructions, iii, 51, 63, 64; adjuncts served with, iii, 121; time required for roasting, iii, 122.

Photograph frames, embroidered, iv, 170.

Photography, decorative use of, ii, 24; use of, in journalism, v, 120; as a career, vi, 8; for women, vi, 37.

Physical training and development: in case of babies, v, 172; importance of, in the education of boys and girls, v, 245; as an occupation for women teachers, vi, 37. (See also Gymnastics.)

Physiological functions of the human body, vi, 78-80.

Pianoforte: advice on choice of, i, 133; vi, 147; piano-back drapery, i, 224; compass of instrument, various kinds, second-hand pianos, management, practising, vi, 147-8; exercises for, for beginners, studies, reading music, loud and soft pedals, dance music, vi, 149; the metronome, classical and romantic music, composers, vi, 150-1; how to make small repairs in a piano, vi, 151-2.

Pianola, description of instrument, etc., vi, 159-60; pianola piano, vi, 161.

Piccalilli, recipe, ii, 221.

Pickles, making of, various recipes, ii, 220-2. (See special names.)

Pickling of beef, ii, 194; of eggs for winter use, ii, 215; pickled peaches, ii, 228.

Picture frames, use of, ii, 3; how to clean, ii, 158.

Pictures: selection—original works, ii, 1; copies and reproductions, ii, 2; framing, ii, 3-4; distribution, ii, 4; methods of picture-hanging (with illustrations), ii, 5-7; care of, ii, 6.

Pies, pastry for fruit, iii, 28; hussar pie, iii, 63; cocoa-nut pie, iii, 75.

Pigeon soup, iii, 33; steamed, for invalids, vi, 107.

Pigeons, stuffed, iii, 52; à la Maréchale, iii, 110; adjuncts served with, iii, 121.

Pigs, methods of cutting up (illustration), ii, 202; sucking-pig, time required for roasting, iii, 122.

Pilchards, curried, iii, 94.

Piles, treatment of, vi, 69.

Pine-apple syrup, ii, 230; creams, iii, 78; jelly, iii, 95.

Pig-peng, instructions for playing, vi, 185.

Pinks, culture of, iii, 225.

Piquant sauce, iii, 39.

Piqué, description and price of material, iv, 72.

Piquet, instructions for playing, vi, 200.

Pits and hot-beds, iii, 238.

Plaice, method of filleting, iii, 9; adjunct served with, iii, 121.

Plan of house, i, 7, 17; illustration, i, 10.

Plan-tracing, as a career, vi, 8; for women, vi, 38.

Plants in the house, decorative arrangement of, ii, 27; pot plants for the house, ii, 27; arrangement of, indoors, ii, 28; plants on the landing, and for the fireplace, ii, 28-30; climbing plants indoors, receptacles for pot plants, plants for halls, ii, 30; cut flowers, ii, 30-6. (See also under Garden and Greenhouse.)

Plaques, ornamental, ii, 23-4.

Plate of Paris, use and price, i, 73.

Plate-powders, i, 183; brushes, i, 188; cleaning and storing, ii, 133. (See Silver.)

Plate-racks (illustration), ii, 168.

Plays for children, arrangements, etc., v, 204-6.

Pleurisy, treatment of, vi, 70.

Plovers, when in season, ii, 211, 213, 214; plovers' eggs en belle vue, iii, 114; time required for roasting plovers, iii, 121.

Plum-pudding, iii, 74; for Christmas, recipe and illustration, vi, 253.

Plums: jam, ii, 227; in syrup, ii, 228; good varieties of, iii, 219.

Plush, description and price of material, iv, 73.

Plymouth china, ii, 10.

Plymouth Rocks (poultry breed), iii, 184.

Pneumatic gas-lighting apparatus, ii, 67.

Pneumatic rubber tyres for bicycles, v, 59-61.

Pneumonia, treatment of, vi, 70.

Poaching, cookery instructions for, iii, 12.

Pockets, dress, iv, 117, 118.

Poisonous plants (berries and fungi), remedies for, vi, 76.

Poisons: cautions against accidental poisoning, vi, 50; arrangement of, in medicine-chest, vi, 50; general rule for poisoning cases, vi, 74; irritant poisons—symptoms and treatment, vi, 74; general poisons and treatment, vi, 75; list of poisons, with symptoms and treatment, vi, 75-6; treatment for poisoning from alcohol, opium, belladonna, prussic acid, strychnine, croton oil, vi, 76-7.

Poivrade sauce, iii, 37.

Poker-work for decorative purposes, ii, 21-2. (See Home art work.)

Police force (Indian), appointment information, vi, 7.

Policies, assurance, iv, 24.

Polish beef, cookery instructions, iii, 57.

Polish breed of poultry, iii, 180.

Polka, dancing instructions, vi, 170.

Polytechnic schools, v, 251.

Pomade for the hair, recipes, iv, 63.

Pony and cart, advice on purchasing, v, 46.

Poor-rates, payment of, i, 37-8.

Pope Joan, instructions for playing, vi, 201.

Porcelain, derivation of the word, ii, 8. (See Bric-à-brac.)

Porcelaine (varnish paint), use of, i, 72.

Pork: how to choose, ii, 190; best joints, ii, 201; method of jointing a

pig (illustration), ii, 202; when in season, ii, 211, 213, 214; cookery instructions and methods of serving, iii, 49, 61; adjunct served with, iii, 120; time required for roasting, iii, 122.

Port wine, Lord Pembroke's jocular recipe, ii, 232; port-wine jelly, vi, 106.

Portable ranges or "kitcheners", description and illustration, ii, 177; boiler for laundry, iii, 146.

Portière curtains, outside and inside (illustrations), i, 225, 231.

Post-office regulations as to letters, parcels, etc., iv, 213-4.

Postal appointments, information regarding, vi, 11; for women, vi, 31.

Potage à la Milanaise, iii, 102.

Potato bread, iii, 21; soup, iii, 33; potato and haricot-bean salad, iii, 90; potato salad, iii, 90.

Potatoes, season for new, ii, 212; cookery instructions, boiling, frying, and steaming, iii, 5, 9, 14; recipes and methods of serving, iii, 69-70; good varieties, iii, 209; culture of, iii, 210.

Potted meats, utensils and various recipes for, ii, 218-20.

Pottery and porcelain, illustrations of, ii, 12. (See *Bric-à-brac*.)

Poultices, preparation and application of various kinds of, vi, 59-60.

Poultry and game: advice on choosing (illustration of game birds), ii, 190, 191; monthly list for season, ii, 211-4; cookery instructions for boiling, broiling, braising, glazing, larding, roasting, iii, 5, 8, 11, 12, 13; game soups, iii, 31, 33; game and poultry entrées, iii, 33; 50, 51, 52, 53, 55, 62, 63, 64, 109; sandwiches, iii, 92; game pie, iii, 113; adjuncts served with, iii, 121; time required for baking and roasting, iii, 122; carving instructions (with illustrations), iv, 35-7; invalid dishes, vi, 102-3.

Poultry-rearing for profit: prospects as to profits, breeds of fowl, preparation of poultry for the table, v, 129-31.

Poultry-yard: general remarks on laying and table breeds with lists and illustrations, iii, 178; laying breeds described, iii, 178-80; table poultry breeds described, iii, 181-2; combination breeds, iii, 182-6; food and feeding—corn, meal and vegetable foods, iii, 186-8; grit and lime, water, rules for feeding, iii, 188-90; fowl-houses and pens—proper size, construction, perches, nest-boxes, fowl-shelter, fowl and grass-runs, and their management, iii, 190-3; insect pests, iii, 193; chicken-rearing—nests and eggs for hatching, testing of egg fertility, hen-coops and their best position, management of young chickens, 194-3; artificial hatching and rearing—incubators and their management, iii, 199-201; diseases of poultry, and their treatment, iii, 201-3.

Powders, for cleaning plate, i, 183; for the complexion, recipes, iv, 49-50; for the teeth, iv, 58.

Premises, care of—precautions against burglary, inspection of garden, stable, water-fittings and sanitary arrangements, iv, 26-31.

Presbyterian minister, training, etc., information, vi, 21.

Presentation at court, formalities and regulations, vi, 260-2.

Presents, marriage, vi, 268-9.

Preserved provisions: tinned meat, bottled fruits, etc., ii, 192-4; various recipes for preserved meat, vegetables, and fruit, iii, 93-6.

Preserves, recipes, iii, 223-7. (See special names.)

Preserving kettle, pan, etc., prices and illustrations, i, 179; ii, 170, 224.

Press-work. (See *Journalism and literature*.)

Print dress material, laundry treatment, iii, 159; description and price, iv, 73.

Priscilla pudding, iii, 74.

Prison clerks and matrons, appointment information, vi, 11.

Professions, education for, v, 230-3. (See under *Education*.)

Property, disposal of, etc. (See *Landlord and tenant, law of*; also *Husband and wife, law of*.)

Property tax, payment of, i, 37, 40.

Pruning of trees and bushes, iii, 213.

Prussic acid, poisoning by, treatment, vi, 76, 77.

Ptarmigan, illustration of bird, ii, 190; cooking instructions, iii, 122.

Pudding-cloths, washing, ii, 171.

Puddings: cookery instructions—boiling, iii, 6; batter, iii, 15; steaming, iii, 14; fish pudding, iii, 42; various recipes and methods of serving, iii, 71-5; plum pudding, iii, 74; vi, 233; coffee ice pudding, iii, 80; tapioca pudding, vi, 108; vermicelli pudding, vi, 109.

Puff pastry, iii, 27.

Punch, rum or milk, ii, 231.

Punctures of bicycle tyres, repair of, v, 60.

Punishment of children, v, 184.

Q

Quadrilles, dancing instructions, vi, 171; court quadrille, vi, 172; quadrille croise, vi, 172.

Quails, when in season, ii, 211, 212; quails à la Neva, iii, 113; adjuncts served with, iii, 121; time required for roasting, iii, 122.

Queen-cake pans (illustration), ii, 173.

Queen's College, London, information regarding, v, 250.

Queen's pudding boiler (illustration), ii, 170.

Queen's reading-lamp for library, i, 67, 162.

Quenelles, cooking instructions, iii, 12, 47, 48; white meat, and veal quenelles, iii, 53.

Quilts, elder-down, how washed, iii, 159.

Quinces in syrup, ii, 229.

Quinsy, treatment of, vi, 70.

Quilts, instructions and requisites for playing, vi, 221.

R

Rabbits: their various kinds, treatment, food, maladies and remedies, v, 110-1. (See also *Hares and rabbits*.)

Rackets, instructions and requisites for playing, vi, 221.

Radiators for heating rooms, etc. (illustrations), ii, 50-2.

Radishes, culture of, iii, 210.

Raisin wine, ii, 234.

Rail cart, illustration, v, 47.

Ranges, kitchen. (See under *Kitchen*.)

Raspberries in syrup, ii, 229; good varieties for cultivation, iii, 219.

Raspberry syrup, ii, 230; vinegar, ii, 231; ice, iii, 80; cream, iii, 83.

Rates and taxes, payment of, v, 37-40; in Scotland, i, 58.

Rats, prevention or destruction of (illustration), iii, 133-5.

Reading, compilation of scrap-book for general information, iv, 214.

Reading lamp, i, 162.

Rearers, poultry, management of, iii, 200.

Receptions, evening, management, etc., v, 25-7; wedding reception, vi, 273.

Recreation. (See *Games*.)

Red cabbage, pickled, ii, 221.

Red-currant jelly, ii, 225.

Redcaps (poultry breed), iii, 180.

Reducing of liquids, iii, 13.

"Reefer" blind, i, 229.

Refrigerator for larder use (illustration), ii, 185; iii, 177.

Registration of births, v, 155; of marriages, vi, 265; of deaths, vi, 95.

Registry offices for the engagement of servants, ii, 79.

Reheating of food, instructions for, vi, 99.

Relief decoration, suitable papers for, i, 81.

Religious employment, training information for the ministry, vi, 21.

Removes, various recipes for, iii, 111-2.

Removing from house, at terms, i, 57; notice of, by tenant, i, 58; instructions for packing furniture, cost of removals, etc., i, 108-9.

Rent. (See *Landlord and tenant, law of*.)

Repair and maintenance, law as to, i, 24-6, 52. (See also *Household repairs*.)

Repoussé work (brass and copper) for decorative purposes, ii, 23-4; examples of, iv, 193.

Research work, facilities for study, vi, 256.

Reversi, instructions for playing, vi, 191.

Revolving bookcases (illustration), i, 160.

Rheumatism, treatment of, vi, 70.

Rhubarb, when in season, ii, 212; culture of, iii, 211; forced, iii, 236; rhubarb wine, ii, 234.

Ribbon work. (See *Embroidery*.)

Ribs, fractured, first-aid treatment, vi, 83.

Rice croquettes, iii, 77; à l'Impératrice, iii, 115; pudding, vi, 107.

Rickets in children, treatment, vi, 70.

Riding and driving: horse and carriage, v, 44; purchase of a horse, v, 45; pony and cart, rubber tyres, v, 46; treatment and care of horses, v, 47-50; care of carriage, harness, v, 50; the stable, v, 51;

the loft, v. 52; the coach-house, v. 52; harness-room, and coachman, v. 53.

Ring-goal, instructions for playing, vi, 221.

Ringworm, treatment of, vi, 70.

Rinsing of white clothes, iii, 154.

Rissoles, cooking instructions, iii, 48; potato, iii, 70; cheese, iii, 84, 88; soufflés, iii, 88; egg, iii, 98.

Rissolettes with Italian paste, iii, 54; de pommes, iii, 70.

Roasting, instructions and illustrations, iii, 23-4.

Roasting-jack and screen (illustration), iii, 13.

Rockerries for gardens, construction, plants, etc. (illustration), iii, 223-4.

Rocking-chairs, i, 151.

Roller bandage, how made, vi, 92.

Rolls, breakfast and dinner, recipes, iii, 19, 21, 22.

Roman Catholic priest, training information, etc., vi, 22.

Roof of house, points requiring attention, in choosing a house, i, 14.

Rooms of a house, considerations as to size, comfort, etc., i, 8.

Roses, culture of (pruning, grafting, budding, etc.), iii, 226; list of select varieties, iii, 226; varieties for climbing, iii, 227; for greenhouse and indoor cultivation, iii, 235.

Rouelle of veal, iii, 111.

Rounders, instructions for playing, vi, 222.

Roup in poultry, treatment of, iii, 201.

Roux for sauces and soups, iii, 18.

Rowing as an exercise, vi, 222.

Rubber toilet-brush (illustration), iv, 48.

Rubber tyres on vehicles, advantages of, v, 46; for bicycles, selection of make, repairs, etc., v, 59-61.

Rugs, for floor-coverings, i, 118; prices, i, 98, 99, 100, 101, 119, 120; for bath-room, i, 174.

Rum punch, ii, 231; rum trifle, iii, 78.

Ruptured varicose veins, treatment of, vi, 81.

Rusks and rusk puddings, preparation of, vi, 107.

Russian bread, iii, 22; salad, iii, 90.

Rust on steel, removal of, ii, 121; on irons, prevention and removal of, iii, 148.

S

Saddles for bicycles, v, 61.

Salad washer, cleaning and illustration of, ii, 173.

Salads, recipes—chicken, iii, 55; cold beef, iii, 55; fruit, iii, 78; hints on making and various recipes, iii, 89-91. (See special names.)

Salamander relief wall-paper (illustration), i, 82.

Sales, drapers', advice on shopping at, iii, 130-2.

Sally Lunns, iii, 22.

Salmon, how to test, ii, 188; tinned, ii, 192; proportion of fat in, ii, 208; indigestibility, ii, 201; when in season, ii, 211-12; methods of cooking and serving (illustrations), iii, 44-5; cutlets of tinned, iii, 95; toast,

iii, 100; slices of, à la Dorade, iii, 103; soufflé, iii, 105; trout à la Russe, and à la Président, iii, 106-7; adjuncts served with, iii, 121; carving, iv, 34.

Salting meat, hints for, ii, 194.

Salts and inorganic substances required in foods, ii, 206.

Salubra paper, use of, i, 81.

Salviati glass, ii, 13.

Sandwiches, hints and recipes, iii, 92.

Sanitary inspectorships, training information, vi, 22; for women, vi, 33.

Sanitary wall-papers, i, 77.

Sanitation and ventilation: sanitary considerations in choosing a house, i, 8-13; ventilation of rooms, i, 17; bath-room ventilation, i, 173; ventilation of rooms with gas-stoves, ii, 42, 43, 44; proper ventilation of houses, vi, 45.

Sardines, tinned, ii, 192; savoury recipe, iii, 88.

Sash curtains, arrangement of (illustration), i, 221-2.

Satin, description and price, iv, 73.

Sauce-pans, sizes and prices, i, 178; cleaning instructions and illustrations, ii, 170, 171; electric, ii, 182.

Sauces, making of, various recipes, ii, 222-3; tannying process, iii, 151; roux for thickening, iii, 18; other recipes, iii, 36-40. (See special names.)

Sausage fritters, iii, 100.

Savings-bank, women clerkships, training information, vi, 30-1.

Savouries, various recipes and methods of serving, ii, 84-9; iii, 117-9.

Scalds, treatment of, vi, 93.

Scaly leg in poultry, iii, 201.

Schäfer's method for restoring respiration, vi, 87.

Scholarships for boys, v, 216; for girls, 256-8.

School teachers. (See Teaching profession.)

Schools, various kinds, v, 217-21; for girls, v, 247-52. (See Education.)

Sciatica, treatment of, vi, 70.

Science and art department, recent educational progress, v, 240.

Scotch carpets, i, 113; baps, and shortbread, iii, 22, 25; greys (poultry breed), iii, 180.

Scrap-book, use and method of indexing, iv, 214-7.

Screens, draught, making and prices, i, 232-4; embroidered design, iv, 145.

Scrubbing-brushes, i, 189.

Scrubbing floors, instructions, ii, 126, 154.

Sculptor, training information, vi, 8.

Sea-bathing, instructions, etc., iv, 68; vi, 227.

Sea-kale, adjunct served with, iii, 121; culture of, iii, 211.

Seasonings for invalid food, vi, 99.

Seasons for food, monthly list, ii, 211-4.

Secretaries, appointment information, vi, 22.

Seed-cake, iii, 119.

Seeds, growing of, for profit, v, 127-9.

Semi-detached houses, rents, etc., i, 2.

Separation deeds, mutual, iv, 7, 17.

Sequestration for rent, i, 55.

Serge, description and price, iv, 73; brushing and cleaning, iv, 89; art serge for embroidery, iv, 134; boy's serge suit, v, 196.

Servants and their duties: housemaid—her dress and general duties, ii, 118-9; daily and weekly duties, occasional work, housemaid's box, ii, 120; stoves and fire-irons, brass fenders, sweeping carpets, dusting, ii, 120-2; laying the cloth, ii, 122; the breakfast-table, ii, 123; the crumb-tray, ii, 123; washing of stone steps, ii, 124; beds, airing and arranging bed-rooms, ii, 124-6; scrubbing floors, cleaning a marble wash-stand, cleaning ceilings and walls, paint, windows and mirrors, ii, 126-8; gilt frames, oil-chloro, stairs and stair-druggets, washing china, ii, 128; sitting-rooms, French-polished and mahogany furniture, stained boards, leather-covered chairs, ii, 129; answering the bell, the tea-tray, dinner-table, ii, 130-2; washing of glass, plate cleaning, sorting linen, brooms and brushes, ii, 132-3; male servants—page boys, handy man, coachman-gardener, ii, 134-8; general servant—engagement and duties, boot, knife, and window cleaning, ii, 138-43.

Servants, engagement of: introductory, ii, 77-8; methods of obtaining—friends' recommendation, country sources, registry offices, charitable institutions, newspaper advertisements, ii, 78-80; characters—interviews with servants and between employers, ii, 80-2; written characters, giving a character, ii, 82; old servants, lady helps, i, 83; nurse, cook, general servant, charwomen, ii, 84-5.

Servants, treatment of: introductory, ii, 108; servants' rooms, ii, 108-11; food, ii, 111-2; allowances, leisure, dress, iii, 112-4; perquisites and visitors, ii, 114; leisure, holidays and wages, ii, 115; illness, ii, 116-7.

Sèvres china, ii, 12.

Sewer rates, payment of, i, 38.

Sewerage. (See Drainage, Sanitation and ventilation.)

Sewing. (See Mending and darning.)

Shawls, washing of, iii, 158.

Sheep, method of jointing (illustration), ii, 201.

Sheep's tongue (tinned), iii, 95.

Sheets, bed, price, i, 192; linen and cotton compared, i, 195; wear and repair, i, 197; changing on sick-bed, vi, 56.

Shell-fish, advice on purchase of, ii, 188.

Sheraton furniture, designs and illustrations—sideboard, i, 136; chairs, i, 155, 162; writing-table and chair, i, 162; cabinet and couch, i, 162.

Shinty, vi, 223.

Shirts, dressing and folding, iii, 156; instructions for making boys', v, 190.

Shock or collapse, treatment of, vi, 87.

Shooting parties, v, 41.

Shop assistants and shop management, information regarding, vi, 26.

- Shopping:** "bargains" at drapers' sales, iii, 130; practical hints on, in purchasing food, vegetables, groceries, drapery, etc., iv, 42-4.
- Shortbread,** Scotch, iii, 25.
- Shoulder fractures,** treatment and bandages, vi, 83, 91.
- Shrimps,** potted, ii, 220; sauce, iii, 37; moulds, iii, 85; devilled, iii, 85; salad, iii, 91.
- Shrove Tuesday,** celebration of festival of, vi, 255.
- Shrubs,** culture and variety of, iii, 204, 227.
- Sick-clubs,** benefit of membership, vi, 54.
- Sickness:** family medicine chest and its contents, cautions against accidental poisoning, surgical appliances, vi, 50-2; precautions in cases of infectious disease — sick-room, precautions for household, disinfection of sick-room and of clothing, fever hospitals, vi, 52-3; management of sick-room — choice of a doctor and duties to him, fees, sick-clubs, consultations, preparation of room, washing the patient, changing the sheets, prevention of bed-sores, conduct in the sick-room, temperature and how to take it, temperature charts and how to mark them, baths, the wet pack, poultices, fomentations, turpentine stupes, the nurse, vi, 53-61; remedies for simple ailments, patent medicines, massage, vi, 61-3; list of ailments and their treatment, vi, 63-73 (see under name of special ailment); poisons — irritant and general poisons, symptoms and treatment, list of poisons with symptoms and treatment, vi, 74-81; "first aid": anatomical relations and physiological functions of the body, arrest of bleeding, bleeding from the nose, ruptured varicose veins, lip wounds, cuts, fractures and their treatment, dislocations, vi, 78-84; fits — fainting, hysteria, apoplexy, epilepsy, vi, 84-5; suspended animation — drowning, suffocation by poisonous gases or by hanging, electrical accidents, frost-bite, shock or collapse, concussion, convulsions, vi, 86-8; removal of foreign bodies from the ear, throat, nose, and eye, vi, 88; bandages, making and mode of applying, with illustrations, vi, 89-93; miscellaneous injuries — bruises, burns, scalds, sprains, insect bites, dog bites, sunstroke, wounds, removal of the injured, vi, 93-5; death — registration, inquest, funeral, vi, 95-6.
- Sideboards,** dining-room styles and illustrations, i, 133, 134, 136, 137, 138; breakfast-room buffets, i, 157; fitment for small flat, i, 204.
- Sieves,** care of, ii, 172.
- Silk,** washing and ironing, iii, 160; classes and kinds of material, iv, 60, 73-4; testing of quality, iv, 75; mending, iv, 83; care and cleaning, iv, 88; silk hats, iv, 90.
- Silver and silver plate:** use of pantry register, i, 181; choice of silver, prices, etc., i, 182; patterns of forks and spoons (illustration), i, 182; cleaning, plate-powders, cleaning of ornaments, removal of stains, storing of plate, i, 182-3; basket for, ii, 131.
- Singers,** professional, training information, etc., vi, 22.
- Singing,** study of, various methods, vi, 146.
- Sinks,** inspection of, in choosing a house, i, 9-10; sanitary basket and brush (illustration), ii, 169; care of, vi, 45.
- Sitting-rooms,** cleaning of, ii, 129.
- Situation of house,** importance of, i, 4-8.
- Size for whitewashing,** i, 73, 74.
- Skating games,** instructions for, vi, 223; roller skating, vi, 223.
- Ski,** remarks on the sport, vi, 223.
- Skin,** care of, iv, 46-51. (See Complexion.)
- Skirts,** making. (See Dressmaking.)
- Skittles,** game of, instructions for playing, vi, 186.
- Sleep,** importance of, for health, vi, 41.
- Sleeplessness,** treatment of, vi, 71.
- Sleeves,** cutting out and making, iv, 111-3, 130-2. (See Dressmaking.)
- Sling bandage,** instructions for making, vi, 89.
- Slips for curtains and furniture,** i, 234-48.
- Sloe wine,** ii, 234.
- Slugs,** remedy against, iii, 135.
- Small-pox,** vaccination as protection against, v, 155.
- Smelts,** adjuncts served with, iii, 121.
- Smoke-cured provisions,** method of treating fish, ham, etc., ii, 195.
- Snap-dragon,** instructions for making, vi, 252.
- Snipe,** advice on purchasing, ii, 191; when in season, ii, 211, 213, 214; cookery instructions, iii, 62, 122.
- Snow-boots,** use and price, iv, 95.
- Soap,** laundry, economic use of, iii, 124, 125; its composition, qualities, etc., melted soap, iii, 149; for toilet purposes, iv, 49.
- Soda baths,** instructions for, iv, 67.
- Sofas.** (See Couches.)
- Soil,** sites suitable for house-building, i, 4-7.
- Soil-pipes,** inspection of, on choosing a house, i, 9.
- Soldering,** repairs by means of, iv, 228.
- Soldier,** choice of a career as — training information, vi, 5-7.
- Sole,** methods of cooking and serving, iii, 45-6; adjuncts served with, iii, 121.
- Solicitors,** training information, vi, 16.
- Solitaire,** instructions for playing, vi, 191.
- Solo whist,** instructions for playing, vi, 202.
- Sore-throat,** treatment of, vi, 71.
- Soufflé à la St. James,** iii, 117.
- Soups:** bottled soups, ii, 194; management of stock-pot, iii, 28; recipes for various kinds, iii, 29-36, 101-3.
- "Spanish blinds,"** i, 226-7.
- Spanish sauce,** iii, 37.
- Spectacles,** advice on the use of, iv, 60.
- Spinach with cream,** iii, 70; culture of, iii, 210.
- Spine fractured,** first-aid treatment, vi, 83.
- Spinning and weaving,** hand — revival of, advantages of home-made goods, prices, wages, etc., v, 131-3.
- Spirit lamps,** use of, ii, 67.
- Sponge-cake,** iii, 26, 119.
- Spoons and forks.** (See Silver and silver plate.)
- Sports.** (See special names, as Curling, Fishing, etc.)
- Sprains,** treatment of, vi, 93.
- Sprats in batter,** recipe, iii, 47.
- Spring box blind** (illustration), i, 228.
- Spring-cleaning,** extra help, best time, method, ii, 149; cleaning of special rooms, ii, 150; cleaning of different articles, ii, 150-60.
- Spring mattresses** (spiral wire), i, 168-9.
- Spring-rollers for window blinds,** i, 229.
- Stable and coach-houses,** inspection of, iv, 29-30; aspect, construction, and management of, v, 51-3.
- Stained boards,** washing of, ii, 129.
- Staining or painting floors:** staining fluids, preparing the floor, applying the stain, re-staining, floor painting, 185-8; cost (amateur and professional), i, 69; staining of hall-floors, i, 117; of woodwork, ii, 14.
- Stains of various kinds,** removal of, i, 183; iii, 151-2; iv, 87.
- Stair carpets,** i, 115, 132.
- Staircase and landings:** furnishings and decoration of various types, i, 126-32; carpet and wall-papers, i, 132; suggestions for staircases, i, 132-3.
- Stairs and stair-druggets,** spring-cleaning, ii, 128.
- Stamp-duties on leases,** i, 48, 58-9.
- Starch in food,** ii, 207; cold and hot-water, iii, 149.
- Starched and non-starched clothes,** iii, 152.
- Steak,** cookery instructions, iii, 56.
- Stealing,** law as to search of servants' boxes, ii, 100.
- Steaming,** for puddings, etc., iii, 14.
- Stencil work,** stencilled wall-papers (with pattern), i, 79; for wall decoration, i, 94, 95; ornamental designs, ii, 18-20.
- Steps for library** (illustration), i, 163; stone steps, washing of, ii, 124, 128.
- Sterilized milk,** preparation of, ii, 186.
- Stewing,** cookery instructions for, iii, 14.
- Stings by insects,** treatment, vi, 94.
- Stitches,** fancy needlework, iv, 137-40.
- Stockingette garments,** mending of, iv, 78-81.
- Stockings and socks,** washing of, iii, 159; mending, darning, grafting, etc., iv, 78-80; knitting directions, iii, 173-7.
- Stock-pot,** management of, iii, 28.
- Stone staircases,** treatment, i, 130; stone steps, washing and cleaning, ii, 124, 128.
- Stoppers of bottles,** how to loosen, i, 185.
- Store cupboard.** (See Cupboard.)
- Stoves for heating,** varieties, advantages and disadvantages, ii, 41-3; gas stoves, various types, ii, 43-6; oil stoves, ii, 46; cleaning of, ii, 120-1; gas and oil stoves for cooking (various designs and illustrations), ii, 178-81.
- Straw hats,** cleaning, iv, 90.

- Strawberries**, season for (monthly list), ii, 212, 213; iii, 212; in syrup, ii, 229; culture, good varieties, iii, 228, 229; forced, iii, 236.
- Strawberry jam**, and jelly, ii, 227; syrup, ii, 230; shape, iii, 73; ice, iii, 80; sandwiches, iii, 92; strawberries and cream (mock), iii, 117.
- Strings**, tape, ribbon, etc., how to sew on, iv, 85.
- Strychnine poisoning**, treatment of, vi, 76, 77.
- Study**. (See Library.)
- Stye** on the eye, treatment of, iv, 60; vi, 71.
- Sub-letting**, law as to, i, 40-1, 49.
- Suburban garden**, iii, 228-9 (see Garden); suburban house, choice of a, i, 2.
- Suffocation** by gas or by hanging, treatment, vi, 87.
- Sugar**, food value of, ii, 207.
- Summary diligence**, for recovery of rent, i, 53.
- Summer pudding**, iii, 75.
- Sun-bonnets**, washing and ironing of, iii, 164.
- Sunshades**, care of, iv, 91.
- Sunstroke**, treatment of, vi, 94.
- Superfluous hair**, removal of, iv, 65.
- Supper parties**: service, suitable menus and wines, v, 31-2.
- Supplementary education**: evening schools, university correspondence, university extension, home-reading union, v, 234-6, 256.
- Surgical appliances**, vi, 51.
- Surprise eggs**, recipe and illustration, iii, 83.
- Surveyors**, land, training information as to, vi, 4; surveyors of taxes, vi, 11; building and engineering, vi, 23.
- Swedish drill**, v, 182.
- Sweetbreads**, cookery instructions, iii, 51, 94, 100; vi, 108.
- Sweetening agents** for invalid food, vi, 100.
- Sweet-potatoes**, cookery instructions, iii, 70.
- Sweets**, various recipes for, iii, 75-8; illustration, iii, 78; sweets for a children's party, recipes and illustrations, iii, 80-3.
- Swimming**, as exercise for children, v, 182; remarks on, vi, 223.
- Switzerland**, educational facilities for women in, v, 261.
- Sylvester's method** for restoring respiration, iv, 86.
- Syrups**, bottled fruits, recipes, ii, 227-9; fruit syrups, ii, 229-30.
- Tableaux** for children, subjects, etc., for, v, 202-4.
- Table-cloths**, prices of, i, 193; damask, i, 194; for kitchen use, i, 195; press for (illustration), ii, 122.
- Table-cutlery**, i, 185-6. (See Knives.)
- Table decoration**: remarks on, v, 18; attention to background, v, 19; choice of flowers and hints on arranging, v, 20; suitable receptacles for flowers, v, 21; centre-spreads, menu-cards, and floral schemes for different months of the year, v, 21-5; Christmas decoration, vi, 251.
- Table-linen**, mending of, iv, 85. (See Linen.)
- Tables**: dining-tables, prices and styles, i, 132, 133, 135, 136; drawing-room tables, i, 143, 145, 149; tea-tables, i, 151; writing-tables for library, i, 160, 162; kitchen tables, i, 175; billiard-table, vi, 178; cleaning and polishing of tables, ii, 155; prices and estimates for various tables, i, 98, 99, 103, 104-5.
- Tambour frame**, use of, iv, 137.
- Tammying**, process described, iii, 15.
- Tam o' Shanter**, instructions for making (illustrations), v, 198-9.
- Tank system** for hot-water supply, ii, 53-4.
- Tantalum electric lamp**, ii, 73.
- Tapestry** for walls, i, 82; tapestry carpets, i, 113; remarks on, iv, 143.
- Tapioca pudding**, vi, 108.
- Tapotement**, a form of massage, vi, 63.
- Taps**, water, repairing leakages, iv, 236-8.
- Tar stains**, removal of, iv, 87.
- Tartare or piquant sauce**, iii, 39.
- Tartines of anchovy**, iii, 118.
- Tartlet tins**, cleaning instructions and illustrations, ii, 173.
- Tattooing**, instructions for, iv, 189-91.
- Taxes**. (See Rates and taxes.)
- Tea-cakes**, iii, 22.
- Tea-cloth**, embroidery design, iv, 154.
- Tea-coseys**, embroidery design, iv, 172.
- Tea-stains**, removal of, iii, 151.
- Tea-tables**, i, 151.
- Tea-tray**, use of, ii, 130.
- Teaching profession**: army and navy schoolmasters, vi, 7, 20; general information as to training, prospecta, etc., for men, vi, 23-6; artists and art teachers, vi, 28-9; private governesses, vi, 38-9.
- Teale fire-grate**, description of, ii, 39.
- Technical education**, importance of special training, v, 226-9; recent progress, v, 238-42; training in agriculture, v, 244; training in domestic science, etc., v, 251-8; scholarships, v, 256.
- Teeth**, care of, iv, 57-8; tooth-powders, recipes, iv, 58, 59.
- Teething** in children, treatment, v, 176-7.
- Telegrams**, post-office regulations, iv, 213.
- Temper** in children, treatment of, v, 183.
- Temperature**, methods of taking and marking on charts, vi, 57.
- Tenant and landlord**, law of. (See Landlord and tenant.)
- Teneriffe embroidery**, iv, 146.
- Tennis**, vi, 224.
- Tests and testing** for milk, ii, 186; for eggs, ii, 187; iii, 194; for different dress materials, iv, 74-6.
- Theatrical profession**, as a career, training information, vi, 2.
- Theatricals** for children, management of, v, 204-6.
- Theft**, law of master and servant, ii, 200.
- Thermometers** for glass houses, iv, 28; clinical for the sick-room, vi, 37.
- Thigh**, fractured, first-aid treatment, bandages, etc., vi, 83.
- Thrapston sponge-cake**, iii, 25.
- Throat**: treatment for sore-throat, vi, 71; removal of foreign bodies, vi, 88; scalds, vi, 93.
- Thrush** in infants, treatment of, v, 177.
- Tic-douloureux**, treatment of, vi, 69.
- Tiles**, glazed for hearth, cost of, i, 70; bath-room walls (illustration), i, 173; cleaning of hall tiles, ii, 159.
- Timbale recipes**, iii, 105, 106, 107, 110.
- Time** (approximate) required for baking and roasting meat, poultry, and game, iii, 122.
- Tinned meats**, remarks on, ii, 192.
- Tinting or dyeing lace**, etc., iii, 153.
- Tinware**, care and cleaning of (illustrations), ii, 172-4; use of empty tins, iii, 128, 129.
- Tips** to servants, v, 40.
- Tithe rent charge**, payment of, i, 37.
- Titled persons**, mode of addressing, iv, 214.
- Toast and toast water**, preparation of, vi, 111.
- Tobogganing**, vi, 224.
- Toe**, twisted, treatment of, vi, 72.
- Toe-nails**, ingrown, treatment, iv, 57; vi, 72.
- Toilet**: complexion, iv, 46-51; ears, iv, 51; hands, iv, 52-4; feet, iv, 55-7; teeth, iv, 57-9; eyes, iv, 59-61; figure, iv, 61; hair, iv, 62-5; baths, iv, 66-8. (See under these headings.)
- Toilet-ware**, selection and cost, i, 170-1.
- Tomato ketchup**, ii, 222; sauce, ii, 223; iii, 40; soups, iii, 35, 102; fritters, iii, 71; salad, iii, 91; tortilla, iii, 100.
- Tomatoes**, cookery instructions, iii, 71, 111, 118; good varieties, iii, 209; culture of, iii, 211, 236.
- Tongue-tie**, treatment of, vi, 72.
- Tonsillitis**, treatment of, vi, 71.
- Tools**: for wood-carving, ii, 16; for the garden (price-list), iii, 206; for embroidery, iv, 135; for metal-embossing, iv, 192; for bent iron-work, iv, 194; for leather embossing, iv, 196, 197; for cane basket-work, iv, 199; for poker-work, iv, 203; tool-chest and its contents for household repairs, iv, 218-30.
- Toothache**, cause and remedies, vi, 72.
- Tourist and holiday** - spending, information, vi, 231-42. (See Holidays.)
- Towels**, prices, i, 193; mending of, iv, 84.
- Town house**, advice on choice, i, 1.
- Tracing plans**, etc., for women, training information, vi, 38.
- Tracing-wheel**, use of in dress-making, iv, 103.
- Traders**, as a career, information regarding, vi, 26.
- Tradesmen**, hints on dealing with, iii, 123; checking of bills, iv, 41. (See Shopping.)
- Translators**, information on choice of a career, vi, 27.
- Traps** for rats and mice (illustrations), iii, 134.
- Travellers' samples**, purchase of, iii, 131.
- Travelling trunks**, boxes, etc. (See Trunks.)

Trays: tea trays, i, 176; use of, ii, 130; crumb-tray, ii, 113; Benares and Moorish trays, cleaning, ii, 151; jappaned trays, cleaning, ii, 156.

Trees, fruit and culture, iii, 213-9; flowering, iii, 227. (See *Garden*.)

Tricycles, makes and prices, v, 63.

Trifle, rum, iii, 78.

Trimmings, simple, braiding, revers, cross bands, frills, kilt-ings, iv, 119-22.

Tripe, cookery instructions and methods of serving, iii, 62.

Trousers, folding, brushing, etc., iv, 87.

Trousseau, estimates, vi, 271-3.

Trout, cookery recipes, iii, 106, 107; adjuncts served with, iii, 121.

Truffles soufflés, iii, 52; on toast (tinned), iii, 95.

Trunks, boxes, etc., sizes and makes for holiday travelling, vi, 228; packing instructions, vi, 229.

Tubs, washing, iii, 145.

Turbot: advice on purchasing, ii, 188; season for, ii, 211-14; boiling directions, iii, 5; adjuncts served with, iii, 121; carving (illustration), iv, 34.

Turkey carpets, i, 110; prices, i, 118.

Turkeys: advice on purchasing, ii, 191; season for, ii, 211-4; cookery instructions, iii, 63, 113; adjuncts served with, iii, 121; rearing of, iii, 202; carving (illustration), iv, 35, 36; for Christmas fare, vi, 254.

Turkish baths, iv, 68.

"Turk's head" brush, i, 187; ii, 127.

Turnip soup, iii, 36; turnip and grated cheese, iii, 71; culture, iii, 111.

Turpentine stupes, application of, vi, 60.

Turtle soup, iii, 96; clear mock, iii, 101.

Tussore silk, description of material, iv, 74; table-centre design, iv, 146.

Tutors, private, social status in household, ii, 87; for boys' education, v, 218.

Tweed, dress material, description and price, iv, 74.

Two-step dance, vi, 170.

Tynccastle canvas and vellum, for relief decoration, prices and illustration, i, 81, 82.

Tyres, rubber, for vehicles, v, 46; for bicycles, v, 59-61; for motors, v, 64.

U

Ude's recipe for curing hams, ii, 227.

Ugly surfaces, artistic decoration of, i, 88-95. (See under *Artistic decoration*.)

Umbrellas, care of, iv, 91.

Umbrella-stands for hall, i, 122.

Underclothing, children's. (See *Children's dress*.)

Undercoverings for carpets, i, 115-6.

Unitarian minister, information as to training, etc., vi, 22.

Universities and University education: examining, teaching, and residential universities, v, 231-3; university correspondence classes, and university extension movement,

v, 235-6; recent educational progress, v, 237-42; reconstitution of London University, 242-4; training and degrees in agriculture, v, 244-5; university education for women, v, 252; metropolitan colleges open to women, v, 253; other universities open to men—Oxford, Cambridge, Durham, Welsh colleges, Scottish universities, v, 254-6; scholarships, v, 256-8; Continental universities open to women, v, 258-61.

Upholstery, home—slips for curtains and furniture, i, 234; slips for chairs, i, 235-7; sofa slip, i, 238; making of cushions (hair and down), i, 238; re-upholstering of furniture, i, 239-40; re-seating of chairs, iv, 231; upholstery as an occupation for women, vi, 26.

Utensils, list of, for kitchen use, i, 177-80; care of, ii, 170-4; illustrations of cooking utensils, ii, 170, 172-3; electric cooking utensils (illustrations), ii, 182; for laundry use, iii, 141-8 (see *Laundry*); for the dairy, iii, 167, 168, 169, 170, 171, 172.

V

Vaccination, law as to, v, 155; results of, v, 155-6.

Vacuum cleaning, ii, 160.

Vanilla ice, iii, 80.

Vapour baths, benefits of, iv, 46.

Varicose veins, treatment of, vi, 73, 81.

Varnishing of woodwork, suggestions, ii, 14.

"Vauxhall" lamps, ii, 72.

Veal, advice on choosing, ii, 189; best joints, with names, prices, and methods of jointing, ii, 202-4; season for, ii, 211-4; cookery instructions, iii, 48, 53, 58, 96, 111; adjuncts served with, iii, 120; time required for roasting, iii, 122; carving instructions, iv, 34.

Vegetable cornets, iii, 68; curry, iii, 68; marrow, adjuncts served with, iii, 121; culture, iii, 210.

Vegetable dishes, various recipes, iii, 65-71.

Vegetable food for poultry, iii, 187.

Vegetable garden, iii, 207-12. (See *Garden*.)

Vegetable salads, hints on making, iii, 89; various recipes, iii, 89-91.

Vegetable sauces, various recipes, ii, 222-3; iii, 36-40.

Vegetable soups, various recipes, iii, 29-36; iii, 102.

Vegetable washer (illustration), ii, 173.

Vegetables: preserved, ii, 193; iii, 93-6; food value, ii, 206-9; list of vegetables in season, ii, 211-4; pickled vegetables, ii, 220-2; cookery instructions—boiling, iii, 5; recipes and methods of serving, iii, 65-71; adjuncts served with, iii, 121; table of vegetable crops, iii, 208; hints on culture, iii, 209-12; hints on purchasing, iv, 42; growing of vegetables for profit, v, 123-5.

Velvet, description and price of material, iv, 74; care and cleaning of garments, iv, 88-9.

Velveteen, washing of, iii, 160; description of material, iv, 74; velveteen corduroy, iv, 74.

Velvet-pile tapestry carpets, i, 113.

Venetian blinds, broom for dusting, i, 188; various kinds, 228; cleaning of, ii, 129; repairing, iv, 136.

Veniseo, hints on treatment and testing, ii, 190; best joints, ii, 204; cooking instructions, ii, 205; iii, 122; when in season, ii, 212-4; adjuncts served with, iii, 120.

Ventilation. (See *Sanitation and ventilation*.)

Vermicelli pudding for invalids, vi, 109.

Vermis in houses, landlord's liability for condition of house, i, 44; prevention of destruction of, iii, 132-5.

Vests, instructions for repairing, iv, 80.

Veterinary surgeon, as a career, training information, vi, 18.

Vienna bread, iii, 22.

Vinagrette of chicken, and of cold beef, iii, 55.

Vinegar stains, removal of, i, 183.

Vines, vine-growing in England, ii, 231-2; pruning and training, iii, 237.

Vingt-et-un, instructions for playing, vi, 203.

Viola, study of—description and price of instrument, vi, 153.

Violin, study of—size and prices of instrument, vi, 152.

Violoncello, study of—description and price of instrument, vi, 153.

Visiting cards, use, shape and various styles of, v, 2; etiquette of card-leaving, v, 3-6.

Visitors, servants', remarks on, ii, 114.

Visits, week-end, v, 41; invitations for, v, 41; time of arrival and departure of guests, v, 42; meeting guests, management of guest-chambers, duties of servants, v, 42.

Vivella dress material, iv, 69, 70, 71.

Vol-au-vent, recipe, iii, 55; of asparagus, iii, 65.

Voting, women's right of, at municipal and county and borough councils elections, iv, 9, 21.

W

Wages of servants, legal considerations regarding, ii, 88-9; rates of payment, ii, 115.

Waistband of dresses, instructions for making, iv, 117.

Waiters and waitresses, engagement of, for special occasions, v, 29.

Waiting at table, instructions, v, 18.

Walking tours, hints and suggestions, vi, 235.

Wall-brushes, prices and illustrations, i, 187.

Wall coverings: whitewash, oil paint, paper, i, 76; plain, patterned, and sanitary papers (illustration), i, 76-7; wash printing, various patterned and stencilled papers, i, 78-9; appropriateness of papers for various rooms, i, 79-80; relief decorations, with illustrative designs, i, 81-2; hangings and fabrics, i, 82; arrangements and accessories, i, 82-3; hanging and fixing, table for calculating number of pieces of English paper required for any room, i, 83-5; spring-cleaning instructions, ii, 159.

- Wall-pockets**, embroidered, iv, 172.
- Walls and ceilings**, inspection of, on choosing a house, i, 15; stencil decoration, i, 94; spring-cleaning instructions, ii, 127, 159.
- Walnut furniture**, dining-room decorations suitable with, i, 140; suggestions for bedrooms with, i, 172.
- Walnut-ketchup**, ii, 223.
- Walnuts**, pickled, ii, 221.
- Waltz dancing**, instructions and illustrations, vi, 165-70.
- Wand exercises**, instructions and illustrations, vi, 142-5.
- War office appointments**, vi, 11.
- Warts**, treatment of, iv, 54; vi, 73.
- Wash printing** for wall-papers, i, 78.
- Wash-stand and writing-desk fittings** for small bedroom (illustration), i, 171.
- Washing**. (See Laundry-work.)
- Washing and wringing machines**, description and illustrations, iii, 141-4; cleaning of, iii, 145.
- Washing of glass and china**, i, 184; washing up of kitchen utensils, hints and suggestions, ii, 168-70.
- Waste**, prevention of, ii, 166; hints on household economy, iii, 123-30; proportion of waste in cooking, iii, 122.
- Waste-paper basket** for library use, i, 161; disposal of waste paper, iii, 227-8.
- Waste-pipes**, inspection of, on choosing a house, i, 10.
- Water**, as a food, ii, 205; proportion of, in different foods, ii, 206; for laundry purposes, iii, 148.
- Water-closets**, inspection of, i, 9.
- Water-colour sketches** for decorative purposes, i, 9; ii, 2; cleaning of, ii, 6.
- Water-rates**, payment of, i, 38, 58.
- Water supply**, inspection of, cisterns, wells, testing of water, etc., on choosing a house, i, 11-3, 18; hot-water pipes and hot-water supply, ii, 46-56.
- Water taps**, repairing of, iv, 236-8.
- Weaning**, instructions, v, 172.
- Wedding**: preliminary arrangements as to settlements, wills, etc., vi, 266; invitations, v, 8; vi, 267; bridesmaids and pages, vi, 267; the bride's dress, preparation in the house, etc., vi, 268; presents, vi, 268; the ceremony—accommodation of guests, floral decorations, the celebration, signing the register, departure from the church, etc., vi, 269-70; trousseau estimates, vi, 271-3; wedding reception, vi, 273; departure of the bride and bridegroom, wedding-cake and cards, wedding notices, vi, 274. (See also under Marriage.)
- Wedgwood ware**, ii, 11.
- Week-end visits**, v, 41. (See Visits.)
- Wells for water-supply**, inspection of, i, 12-3.
- Welsbach Kern radiator**, ii, 45-6.
- Wesleyan minister**, training information etc. vi, 21.
- West Indian foie-gras**, iii, 89.
- Westphalian hams**, method of curing, ii, 217.
- Wet-nurse**, qualifications, diet, etc., v, 158-60.
- Wet pack**, application of, vi, 59.
- Whist**, instructions for playing, vi, 204-6.
- White clothes**, laundry treatment of, iii, 153-5.
- White soups**, iii, 29, 32, 36; sauces, iii, 36.
- White work embroidery**, iv, 151-4.
- Whitewash on carpets**, removal of, ii, 152.
- Whitewashing and distemping**: cost of (amateur and professional work compared), i, 67-8; ingredients, implements, preparations, whitewash, i, 73; distemper, i, 74; removing old whitewash and stopping cracks, i, 74; uneven ceilings, i, 75; number of operators, method of application, limewash, i, 75-6.
- Whiting**, adjuncts served with, iii, 121.
- Whitlow**, treatment of, vi, 73.
- Whitworth scholarships and exhibitions**, v, 241.
- Whole-meal bread**, iii, 43.
- Whooping cough**, treatment of, vi, 73.
- Widgeon**, method of carving, iv, 37.
- Wife's legal position**. (See Husband and wife, law of.)
- Wild duck**, cookery instructions, iii, 122; carving, iv, 37.
- Wild flowers** for decoration, ii, 34.
- Wills**. (See Husband and wife, law of.)
- "Wilson" gas cooking stove**, patent radiating grate and breakfast cooker (illustrations), ii, 179, 180.
- Wilton carpets**, description of, i, 113.
- Window blinds**, i, 226-30. (See Blinds.)
- Window curtains**, i, 209-26. (See Curtains.)
- Window-gardening**, instructions, iii, 230.
- Window seats and recesses**, breakfast-room fitment, i, 157; fitment for small flat, i, 206.
- Windows**, inspection of, on choosing a house, i, 15; legal liabilities as to window cleaning, ii, 97; directions for cleaning, ii, 127, 143, 159; repairing of fittings, iv, 233-6. (See Household repairs.)
- Wine jelly** for invalids, vi, 106.
- Wine stains**, removal of, iii, 152.
- Wines**, decline of wine industry in England, ii, 231; recipes for home-made, ii, 232-5; for dinner, luncheon, and supper parties, v, 17, 31, 32.
- Wire mattresses**, i, 168; meat-covers, i, 180; utensils for kitchen use (illustrations), ii, 173.
- Women**, facilities for technical and university education for, v, 250-61 (see Education); occupations for, vi, 27-39. (For special occupation, see item name.)
- Wood carving**, suggestions for amateurs, ii, 22; as a career, vi, 8.
- Woodcock**, advice on purchasing, ii, 191; when in season, ii, 211, 213, 214; cookery instructions, iii, 122; carving, iv, 37.
- Wooden articles** (kitchen), how cleaned, ii, 171.
- Woodwork**: inspection of, on choosing a house, i, 15; wood panelling, i, 96; decorating—varnishing and staining, ii, 14; French polishing, ii, 15; darkening wood with ammonia, ii, 15; gilding and bronzing, ii, 15-6; designs on, ii, 16; inlaying, ii, 17; artistic painting on wood, ii, 17; suggestions for amateurs on painting, stencilling, poker-work, carving, and carpentering, ii, 18-23; cleaning of stained boards and floors, ii, 129, 154.
- Wool**, fibres of, etc.—description and illustration, iv, 75.
- Woollen materials**, classes and kinds of, iv, 69-74; tests for adulteration, ii, 74; mending of woollen dress fabrics, iv, 82; brushing and removal of stains, iv, 87.
- Worcester porcelain**, description of, ii, 10.
- Worcester sauce**, ii, 223.
- Work and health**, advantage of occupation, vi, 42.
- Workmen's Compensation Act**, referred to, ii, 91, 92, 95, 116.
- Worlingworth Rectory recipe** for curing hams, ii, 217.
- Worms**, treatment of ailment, vi, 73.
- Wounds**, how treated, vi, 94.
- Wrestling**, various styles of, vi, 224.
- Wrinkles**, treatment of, iv, 50.
- Writers**, etc., information on choice of a career. (See Journalism and literature.)
- Writers to the Signet**, vi, 16.
- Writing tables** for drawing-room, i, 145; for study, i, 158, 160; Sheraton writing-table and chair (illustration), i, 162; bedroom fitment (illustration), i, 170, 171; fitment designs for flat furnishing, i, 201, 205.
- Wyandotte breed** of poultry, iii, 184.

Y

Yachting and cruising, as a means of spending holidays, ii, 234-5.

Yeast (brewer's), amount to be used, etc., iii, 18; substitute for, iii, 19; recipe for bread without yeast, iii, 19.

Yoked dress for girls, v, 193; yoked bodice, v, 194.

Yokes, method of cutting (with illustrations), iv, 108, 109.

Yule log, vi, 249.

Z

Zephyr, dress material, iv, 69, 73.

Zither, description and price of instrument, etc., vi, 187.

